

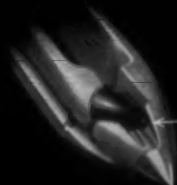
TEXTILE BULLETIN

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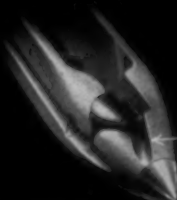
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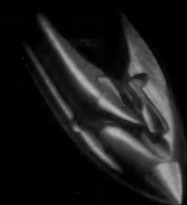
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No. 266 (V Type)
No. 268 (Bridge Type) } For
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See This Point

No. 183-X Replaces No. 183-P
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Give New Protection

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THE KEEVER STARCH COMPANY
COLUMBUS, OHIO

Trends In The Textile Industry*

By Robert West

President Riverside and Dan River Mills, Danville, Virginia

MR. LUTHER HODGES was going to talk on "Trends in the Textile Industry," and I had hoped to hear him discuss that, because I should like to find out what the trends are. Of course, everyone realizes that the situation is terribly confused, and I seek every opportunity I can get to have the matter clarified, to see if there are any trends that are readily discernible. I am not sure of any of them. But there are one or two aspects of our business that do seem to me to be reasonably certain that I should like to discuss for a few minutes.

In the first place, there is the question of machinery—the use of machinery. Our business, of course, is using machinery. Sometimes we use it right, and sometimes we make a bad use of it. I have a profound conviction that the next few years are going to see a decided alteration in textile machinery. There are evidences of it before us right now with which we are all familiar: the long (or, as I believe they prefer to call it, the improved) drafting arrangement on roving frames and spinning, the higher speed looms, the new types of drafting arrangements for drawing, and various other devices that are coming on machinery. Every one of these improvements on machinery and every new machine that we get to perfect our work or give us a more economical operation of our mills without exception is directed toward one thing, and that is the elimination of labor. I can not recall a single development of machinery in the textile business that has proved satisfactory to the operation of mills that has not resulted in the displacement of labor—that is, the elimination of it. Whereas, we might have had ten men running a job, the introduction of new machinery made it possible to run the job with eight men. We all remember what the Barber-Colman spooler and warper did to our spooling rooms years ago. That thing about machinery seems to be the common denominator of all machinery that has been developed, and in my opinion it is going to develop with increasing speed in the next few years. That is, in the manufacture of our product we are going to be able to get a given result with far less application of human energy. I say that is one thing of which I am reasonably sure. I think it is bound to happen, and I

believe that the industrial enterprise which does not avail itself of that opportunity to get equipment accomplishing those results will be in a pretty tough spot, as time goes on, in this industry.

There are, of course, people who say that that is all wrong—that the development of machinery to take the place of labor creates unemployment and that it is an undesirable thing. We have all heard that; I have read great long articles by distinguished economists who press that point, that one of the difficulties in our economic life today is the fact that so much labor has been displaced by machinery. But those of us who are managers of industrial enterprises can not agree with that point of view. If there is one thing that industry has to do it is to keep abreast of the technological developments in industry. If there is one thing that the consuming public of this country can demand of industrial management it is that the product be produced upon the most economical machinery on which it is possible to produce it. That is the only way by which the product of industry can be delivered to the consumer at the lowest possible economical price.

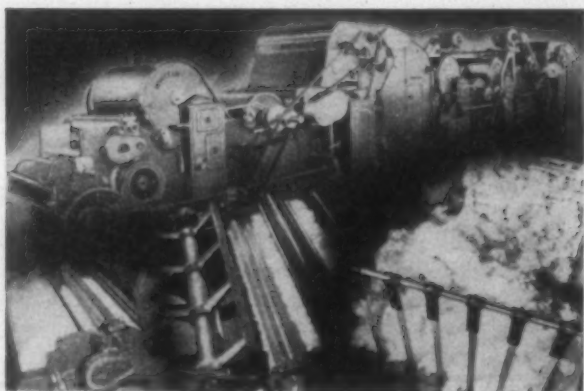
But there is a great problem brought up in this question of displacement of labor, and it is to that problem that I should like to direct your attention for just a few moments, realizing that all of you are men who have the direct responsibility of handling the situation when it is put into your various organizations. As I say, it can not be stopped; we do not want to stop it; it must carry on.

In the first place, I think the application of this new equipment or these new processes or of new methods should not be made faster than the labor involved can be taken care of. A great many times we can avoid the difficulties that come about through the introduction of newer or improved types of machinery by making the introduction slow enough and well prepared enough so that the displaced labor involved can be taken care of. In a great many cases it can be taken care of through the normal turnover of labor in the mill; and if the management carefully makes its plans for installations with that in view, upon the introduction of a machine that will in the long run eliminate, say, two people, part of its plan for the introduction of that machinery takes up or contemplates the placing of that displaced labor. That can be done, and in my opinion it is a responsibility of those

*Address presented at meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association, April 24th, at Leaksville, N. C.

of us who manage our industrial enterprises to see that the changes are made in such a way that taking up the displaced labor is just as much a part of the plan for the introduction of the machinery as the installation of the machinery itself. Sometimes it is difficult; sometimes it does not show quite the savings on the operating account that it would to make a hurried and rapid installation; but in the long run I am convinced that any industry that faces the necessity of technological change—the introduction of new machinery, the introduction of new methods—serves itself best if, as part of its plan for introducing those changes, it considers the taking up of any labor that might be displaced by it. Of course, we all realize that a great part of the hue and cry about the so-called stretchout in our industry is due to the fact that in a great many cases no provision has been made for taking up the displaced labor in the introduction of this machinery into our industry. As I have said, in my opinion this is coming at an increasingly faster rate over the next few years and is going to involve serious problems of labor displacement, and the part of wisdom will be served by management to make the taking up of the displaced labor just as much a part of its program of rehabilitation as the introduction of the new machinery.

I appreciate that there are a great many problems of mill management that we can not answer, a great many decisions in mill management that we do not make. We get our orders from someone else. But this is something we can answer; this is something we can take care of. The operating men who run the machinery hold it in their hands to have this technological improvement within the industry carried on in an orderly way, so that there will not be the heart burns about it that there might otherwise be. I say it can be done because I have had



the opportunity of witnessing a good many occasions on which it has been done. On some occasions the operation had to be slowed up; we could not make the change as fast as we should have liked under other circumstances; but the rate of the change was governed in such a way that the people who would normally be displaced by the change were found opportunity to be placed so that they could continue to earn their livelihood. I also appreciate the fact that the problem differs between the large plant, on the one hand, and the small plant, on the other. But the point I wish to place before you is this—that, as over the next few years we see these opportunities to improve our plants by the introduction of new and improved ma-

chinery, the problem of the labor involved in it and the displacement of workers involved by these changes be taken into consideration as just as much a part of the change as the actual introduction of the machinery and that when the changes are made they be so planned in speed of installation that the amount of labor displacement is reduced to the very minimum. The textile industry, particularly here in the South, is in excellent position to do that if it will only guide its plans with that in mind; and I assure you gentlemen that there are very few things about the operation of our mills which I consider of more importance at the moment than that particular thing. After all, we are responsible for the economical operation of our machinery, and we are also responsible for these people that we have brought into our mill communities to work our machinery and should keep them employed just as consistently as we possibly can.

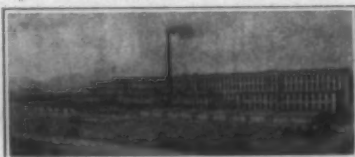
I shall illustrate by relating one incident which shows what I believe is the wrong way to do it. I had occasion to be talking with a manufacturer—not a textile manufacturer. He had a certain type of machine in his plant, and he had brought in two or three families, the men of which families were operating this machinery. They had been taken from their previous homes and brought into the community and put to work. Inside of six months there had been a change in the type of machinery to be used in that particular operation, and these people who had been brought in just six months before were summarily dismissed and new people brought in to operate the new type of machinery. In my opinion that is wrong; that is a wrong industrial procedure; and the correction of that sort of thing and the responsibility of seeing that such things as that do not happen rest upon you and me—those of us who have the direct charge of operating this machinery.

So that is the first thing that I wanted to bring to your attention. As we look forward to the consideration of our business for the next few years we are going to be confronted with the necessity of vast changes in our machine equipment. I know I am right about that. About a year ago a very careful study was made of textile equipment in the United States in which the year 1910 was compared with the year 1936 in ten staple constructions of goods. It was figured that in that period of twenty-five years, taking the best available equipment in the year 1910 as contrasted with the best available equipment in the year 1936, the possible output per man-hour on those identical fabrics had increased, the minimum was 50 per cent. and the maximum was 150 per cent. Now, there has been no such increase in output per man-hour on an average throughout the industry. So that means that there still remains today a tremendous field in the textile industry of our country for the adaptation of the best available equipment, which will be developed, in view of the improved conditions in the industry. Certainly within the next few years the opportunity to take full advantage of this available equipment will be made use of by the great bulk of the mills with which we are connected, and the change will come with increasing rapidity. And, in my opinion, that is what leads to this problem which I have just mentioned to you and which I consider so important. I believe that

(Continued on Page 24)

Air Conditioning Discussed at Leaksville Meeting

THE Northern North Carolina-Virginia Division of the Southern Textile Association held its regular spring meeting in the high school building at Leaksville, N. C., on Saturday, April 24th, with the chairman, L. J. Rushworth, superintendent of the Riverside Cotton Mills, Danville, Va., presiding.



The meeting was called to order by Chairman Rushworth at 10:20 o'clock, and the invocation was said by J. O. Hopkins, spinning foreman, Morehead Cotton Mills Company, Leaksville. R. H. Tuttle, superintendent of the Karastan Rug Mill of Marshall Field & Co., Leaksville, welcomed the visitors to Leaksville.

Chairman Rushworth: We are very fortunate to have with us this morning, J. R. Henderson, of the Parks-Cramer Company, Charlotte, N. C., who will give us a little information on air conditioning at the present time.

Mr. Henderson's address appears on Page 9.

Mr. Henderson: I understand that at this point you want to have a general discussion. I will make an effort to answer your questions, although I realize that some of them may stump me.

Chairman: Any questions which the members wish to put to Mr. Henderson he will try to answer. We all know that humidifying and conditioning are matters that need thought in our work, and Mr. Henderson will be glad to give what information he can.

Mr. Tuttle: I remember that some years ago I was visiting in two plants in practically the same area on one day. In one plant they had ordinary humidifiers, and in the other plant they had a flume system, with a tower on top to wash the water. Well, the temperature seemed to me to be at least ten or twelve degrees lower in that plant than in the other, and I wondered why it was. I should like to hear some explanation of that.

Mr. Henderson: In that plant they had controlled ventilation. The type you are speaking of is the central station, and the other is the direct humidifiers. That is the type that is used for full-fashioned hosiery mills. The full-fashioned hosiery mills can not use direct humidification because of the wetting of the needles and rust.

W. E. Gammon, overseer weaving, No. 8 Mill, Danville, Va.: I should like to know what temperature you recommend to produce a relative humidity of, say, 75 or 76 per cent.

Mr. Henderson: Well, a 75 per cent. humidity, with the proper amount of evaporative capacity, should give you a temperature of around 86 degrees. The higher the humidity the lower the temperature you can maintain.

Mr. Gammon: What reading of your dry bulb would you recommend to produce 75 per cent.?

Mr. Henderson: As I was saying awhile ago, the lowest temperature you can get by maintaining your 75 per cent. is about 86 degrees. You see, the temperature you have in a room depends on the evaporative capacity you have, and your humidity is limited by the temperature you carry.

A. D. Floyd, Sanford: What type of humidifier has been found to be the best, and what percentage of relative humidity, in a mill using superdraft in the card room and long draft in the spinning?

Mr. Henderson: We have not made any installation in mills with spinning carrying long draft and superdraft in the card room. I imagine, speaking of the card rooms, you will now have to carry a high humidity—higher because of the time limit. The stock goes through so fast that it will not pick up the proper regain unless you do have high humidity. In the spinning room I should think 60 per cent. humidity.

E. M. Holt, manager, Erwin Cotton Mills Co., Cooleemee, N. C.: Is it not a fact, in deciding on the relative humidity to carry in the spinning rooms, that it is better to try to carry a humidity that can be maintained than to try to carry an excessive humidity? In other words, if you can maintain a relative humidity of around 52 per cent., is it not better to carry that than to try to get 60; which you can reach only at times?

Mr. Henderson: That is exactly right.

Mr. Floyd: In my particular case I have slubbers, drawing, and cards all in the same room. If you keep the humidity necessary to run the slubbers satisfactorily you can not do the cleaning.

Mr. Henderson: That is right. Some people do not require it at all on the cards.

W. J. Jennings, carder and spinner, Minneola Mfg. Co., Gibsonville, N. C.: We have installed humidifiers in the last eighteen months and are getting along fine with them. I try to carry in my spinning room right around 55. We are running all cork rolls, and I think we are getting along fine with it.

Mr. Henderson: Those cork rolls require a pretty high temperature, too, don't they?

Mr. Jennings: Higher than the leather, yes, sir.

Chairman: I think you have covered everything very fully, Mr. Henderson. We thank you for your very interesting paper and for the time you have given us this morning.

Right at this time we have with us another Mr. Henderson—Mr. Tom Henderson, who is going to speak to us now. We are fortunate in having both these Messrs. Hendersons present this morning. Mr. Tom Henderson is a feature writer for *The State*, a magazine which is published in Raleigh, N. C. He will give us a little talk at this time.

Mr. Tom Henderson made a humorous address.

Chairman: We thank you, Mr. Henderson.

The meeting is now open for any discussion the members wish. If there is anything you wish to bring up at the present time, the floor is open. Before we go into the discussion, though, I wish to say that we have with us the vice-president of the Southern Textile Association, and I should like him to say a few words to us. I present Mr. Edwin M. Holt, of Cooleemee, N. C.

Mr. Holt, vice-president, Southern Textile Association:

Mr. Chairman, I am delighted to be here and see so many people attending this meeting. To begin with, the question of humidification and air conditioning has a most important place in the textile industry today. I also think that importance is being enhanced by the new methods. For instance, the long-draft spinning frame that we saw in Greenville at the Textile Exposition is quite a departure from even the present long-draft systems. We do not know whether it is practicable or not, but no man nowadays can say that anything is not practicable. If there is one outstanding characteristic of the modern operating executive in the South I think it is open-mindedness. I think it is most important that he maintain an open mind. Within the last few weeks we have had to adjust our thoughts along lines that we have never had to think about before. It is hard to tell where the present tendencies are going to lead. I had not planned to say anything today, but I should like to leave this thought with you. Open-mindedness—the willingness to face a new problem and apply new thoughts to it, I think for you men is the only way that it will be possible for you to maintain your high degree of efficiency and usefulness to your companies in the days that are to come.

I am glad to be here, as I have said before, and I should like to remind you of our annual meeting at Myrtle Beach in June. We are preparing a program that I think will have a lot of thought in it for you and should make you better operating executives. After all, that is the object of the Southern Textile Association, so we hope you will attend the annual meeting.

I thank you, Mr. Chairman.

Chairman: We thank you, Mr. Holt. We are very glad to have you with us this morning.

We planned, in our preparation for the meeting today, a little discussion on cottons. I asked two or three of the men to give a little talk on that, but they do not seem to be here this morning. I had word from one of them that he would not be able to be here. They have been making some tests. I think we shall have to pass that part of the discussion by at the present time.

B. Ellis Royal, the new secretary of the Southern Textile Association, is with us this morning, and I want to make you all acquainted with him. I hope that he has a few words for us. Mr. Royal.

B. Ellis Royal, secretary, Southern Textile Association, Charlotte, N. C.: All I have this morning is some announcements.

The meeting of the Master Mechanics' Division will be held next Tuesday, April 27th, in the Chamber of Commerce Building, Charlotte. The Eastern Carolina Division will meet at State College, in Raleigh, on Saturday, May 1st.

Mr. Holt mentioned the annual meeting of the Association, which will be held June 11th and 12th at Myrtle Beach, S. C. One new thing will come up at that meeting. It has been the custom in the past to give a prize for low score in golf. This year we shall give a prize for high score, also, so everyone will have a chance to compete. (Laughter.)

I want to ask that you sign the registration cards which have been passed out, so that we shall have a record of those in attendance here. And I shall be glad to receive any dues at this time from members who have not paid up, or applications for membership if you have not already joined the Association:

Chairman: We have with us this morning, also, a member of the executive committee who came in just a while ago, Mr. J. R. Copeland. We should like to have a word from him at this time.

J. R. Copeland, vice-president, E. M. Holt Plaid Mills, Inc., Burlington, N. C.: Mr. Chairman, I had no idea I would be called upon to say anything. I have just gotten in to the meeting. In fact, I got lost. I got to the grade school first, then finally found my way here.

I can only say, as Mr. Holt has just said, that there are quite a few new problems facing us all in this business. Twenty-five or thirty years ago, when I first began to run a room, we had pretty set rules that we could follow; but that is a thing of the past, from the way I see it; and men of my age and younger men have got to adjust their minds and thoughts to new things, new ways of doing business. In fact, our whole economic system is going into a very serious change, in my opinion. We are going to be living under different rules and regulations than we ever dreamed of, and in order to keep abreast of the times we have to forget quite a few things we have learned. Take our own industry; the long draft has come about, the automatic loom, the tying-in machine, and things of that kind. Some of them are new, of course, and some of them are not, but we are still improving them. We can not sit still and keep up with our own industry, to say nothing of the general outlook and the policies of government and things of that kind. We simply have to be wide open and forget many of the set teachings that we have followed in our lives and swing into the new ways.

I have nothing else to say—in fact, I had no idea of making any remarks at all. I thank you very much.

Chairman: Thank you, Mr. Copeland. We are glad to have you with us.

If there are any questions on air conditioning or on any other subject we shall be glad to have you bring them up now. The meeting is open.

W. Lexie Davis, assistant superintendent, Proximity Mfg. Co., Greensboro, N. C.: Mr. Chairman, I should like to have some information on the results of tests made on the running quality of Eastern and Western cotton, if anyone has made any.

Chairman: Mr. Davis, did you make any experiments yourself in mixing the cotton?

Mr. Davis: No, sir. As I explained at the executive meeting, we had our opening machine torn out in making some changes, and we could not make the test in time for the meeting.

Chairman: Is there anyone present who has had experience in the blending of Eastern and Western cottons. If so, we shall be glad to hear from them. Mr. Holt, have you had any experience with that?

Mr. Holt: I should like to say this, Mr. Rushworth; I am quite sure this group of men are more interested in humidification than they have indicated. I am also quite sure that they are a lot more ignorant than they have indicated. If you can not ask an intelligent question, I think the way to get something out of a meeting is to ask the most foolish one you can think of. I think this is a wonderful opportunity to find out something about humidification that we do not know, because there is a man here who knows all about it. I wish someone would ask something to get him to talking. For instance, I will ask this question: I should like to know something of the cost of a central humidifying system and air conditioning

based on the number of cubic feet in the room or on the number of spindles in the room.

Chairman: Can you answer that, Mr. Henderson?

J. R. Henderson: No, sir, I can not answer that off-hand.

Mr. Holt: I didn't expect you to answer it, Mr. Henderson; I just wanted to get you to talking.

Mr. Henderson: The conditions vary so much that you can not give any estimate without knowing more about the particular situation.

Mr. Holt: If you had a spinning room with one hundred frames in it driven by motors, and another spinning room with one hundred frames driven by belts and shafting lines, you would make an entirely different application, would you not?

Mr. Henderson: Take a spinning room with the frames driven by individual motors, and then take a room with one big motor outside, for instance. Say these those frames all require the same amount of power to drive them. The room with the individual motors would require more humidification than the one with the motor outside.

Mr. Holt: How much more?

Mr. Henderson: Fifteen per cent, say. We add 15 per cent. for individual motors in the room.

Mr. Holt: Did I understand you to say in your paper that in cotton mills your experiments had indicated that it is not necessary to control temperatures other than by the circulation of air, with no refrigeration?

Mr. Henderson: No. I guess what I was saying was that the control of temperature is not as important in a cotton mill as in a full-fashioned hosiery mill.

Mr. Holt: Has your company attempted not only to circulate humidified air but air of a predetermined temperature, by refrigeration or by heating, in conjunction with the central humidifying system?

Mr. Henderson: Well, there has never been, to my knowledge, any dehumidifying used in a cotton mill other than in a test laboratory, because the cost of it would be almost prohibitive, and we can control the temperature and the humidity very closely in the twister room or the spinning room or any other room in the winter time. But in summer, it is more difficult to control, because of the difference in the outdoor air conditions. If it is hot and dry outside the incoming air will absorb more water and in turn will absorb more heat.

Mr. Copeland: How much more?

Mr. Henderson: Take a humidity of 65 per cent.; you can carry your inside temperature about 13 degrees above the outside wet bulb temperature.

Mr. Tuttle: I should like to ask if it is possible, in a carpet mill, to put a certain amount of humidity in the warp and a less amount in the pile. An excessive amount of humidity is a detriment to the pile, but we need humidity in the warp.

Mr. Henderson: I am not familiar at all with the conditions in woolen mills, and I can't answer that.

Mr. Tuttle: Would it be logical or possible to condition it in some other place? For instance, I have seen it conditioned where it comes off the slasher, in a very confined area.

Mr. Henderson: Would that be in a conditioning room, say?

Mr. Tuttle: That was material five or six inches wide.

Mr. Henderson: We put in some special conditioning apparatus in the asbestos plant at Charlotte.

A Member: Tell us about that.

Mr. Henderson: We put in a special box there for conditioning it, and the strip of cloth passed right through the humidifying box.

A Member: Was that the cloth or the warp?

Mr. Henderson: Cloth, I think.

Mr. Floyd: I should like to find out something. Since installing long draft the temperature of the room is decidedly higher, and the humidity is harder to control. I should like to know why the temperature is higher and how the humidity can be properly controlled.

Mr. Henderson: The reason that the temperature is higher is that long-draft spinning requires more horsepower to drive the frames. We have found that true in every case. We have found in some cotton mills that it takes as much as 15 h.p. to drive a spinning frame with long draft on it.

Mr. Floyd: In my mill we did not change the motors, and my frames are drawing not more than one-half h.p. more than they did before.

Mr. Henderson: What humidity did you put in with short draft?

Mr. Floyd: From 60 to 65 per cent.

Mr. Henderson: If a system is designed for high humidity it is very hard to get that system to carry a low humidity.

Mr. Floyd: I visited a mill yesterday that has been carrying long draft for about two years and I understand is now going to spend about \$10,000 for a ventilating system.

W. P. Barton, foreman, Suiting Mill, Spray, N. C.: One of the mills here is running a lot of cut rayon. We should like to know how to get the proper humidity in the picking and blending and carding and drawing departments.

Mr. Henderson: How are you applying it now?

Mr. Barton: Right now we have humidifying heads over the hoppers. We have not been able to get enough in there yet. We have three heads over one hopper and two other another.

Mr. Henderson: There is not an excessive amount of ventilation in the room, is there?

Mr. Barton: No, sir.

Mr. Henderson: It may be a question of the time element. You have to give it sufficient time to pick up the moisture.

Mr. Barton: Has anyone else in the room had any experience with cut rayon?

Marshall E. Lake, power sales engineer, Duke Power Co., Charlotte, N. C.: At the meeting of the Greenville, S. C., branch of the American Society of Mechanical Engineers, held the week of the Greenville show, there was a Mr. Kennette present, from the DuPont Company, who had a paper on the importance of humidity control in the rayon industry. He referred to cut rayon, and I think if you will get a copy of that paper it will probably give you what you want.

(This paper will appear in an early issue of Textile Bulletin.—Editor.)

T. C. Pegram, Supt., Erwin Cotton Mills Co., Mill No.

(Continued on Page 17)

Traders Expect Early Resumption of Large Scale Buying

By Prince M. Carlisle

DESPITE some seven weeks of slow trading, print cloth and other cotton gray cloth prices have held within reasonably close distance of the high levels established earlier in the year, and Worth Street traders are now convinced that a new buying movement which may well achieve the proportions of that of the first quarter is likely to develop early in May.

Print cloth mills entered April with an estimated total of unfilled orders of 540,000,000 yards, the highest total in some years, and against this they held a stock of about 41,500,000 yards, leaving them a "net backlog" of 498,500,000 yards. In the latter part of March, they were producing about 35,300,000 yards a week, but in April there has been a sharp reduction in total output by reason of a very general return to 40-hour shifts. Current production is running about 31,250,000 yards, so that the net backlog—that is, the excess of unfilled orders over stocks—at the first of the month was equal to approximately 16 weeks production.

Under these conditions, there was no great temptation to reduce prices. A further consideration was the fact that for a long time, buyers have shown only minor interest in goods and few chances appeared to book appreciable orders even at discounts. Second hands have been liquidating a moderate amount of goods, although resale offerings have been surprisingly small in relation to the tremendous quantities either on order or in the hands of buyers.

The belief that a resumption of large scale buying is likely to develop shortly is based upon the sharply improved inquiry of the past week or two. Buyers who have been credited with initiating each of the previous four or five buying movements have been bidding for July and forward deliveries. Their bids have ranged around 37 to 37½ cents a pound, whereas for the late deliveries mills are not willing to consider much under 38½ cents a pound and on several constructions are quoting somewhat higher.

It is considered probable that buyers and sellers will get together as to prices by the first week in May or a little later. Mills, fortified as they are with large backlogs, see no point in rushing matters. They are also concerned over the prospects for further increases in costs. Their usual attitude is that even if they miss the first few orders, they will be better off to decline bids below their quoted lists, since as soon as any moderate buying has developed, it is likely that a considerable period of activity will follow, and they will be able to move out their production during that period.

Buyers Waiting

All but a few buyers appear to be content to sit on the sidelines. They feel that there is plenty of time to await developments before rushing in on their late requirements. The individual buyer who seeks to buy at the low usually fails. Many believe their best policy is to wait until the buying movement has started, and even if this does mean that they will miss the low point, they will be able to buy on a scale upward and almost certainly will have time to get in on the way up rather than at the top.

This leaves the situation with a few buyers ready to start off the buying but necessarily anxious to test the market thoroughly in order to catch the low. This is the explanation for their low bids. As mills consistently refuse these bids at the lowest levels, they are likely to be lifted slightly. The few buyers involved in these operations apparently are convinced that they eventually will strike a level below current quotations at which they will be able to pick up a moderate amount of goods. They are conscious of the determination of most mills to hold at currently quoted levels, but they feel that a few mills may eventually be tempted by some of the bids under the present market.

Meantime, merchandising of spot and nearby goods continues slow. Shipments against old contracts are running fairly heavy, but while this is reducing the mill backlogs, the mills have such large unfilled orders that they see nothing to worry about in this situation.

The threat of higher costs to mills is considered very real. There have been some indications that the Administration, feeling its oats after the Wagner Act decisions, wants to push through some wage and hour legislation as a test both of the temper of the public and eventually of the Supreme Court's willingness to go along in the direction of approving such measures, as indicated by some of the language of the Wagner decisions. For this purpose, the report in Washington is that the Ellenbogen Bill is again being dusted off and may be on the White House must list very shortly.

The minimum wages involved in this bill are higher than are currently being paid, and it contains many other objectionable features. The industry has registered in no uncertain terms with the White House its objection to any maximum hour legislation at any figure under 40 hours a week, and it is likely that labor, as currently organized, will go along with this objection.

(Continued on Page 13)

Air Conditioning In Textile Mills*

By J. R. Henderson

Sales Engineer Parks-Cramer Company

AT the outset, I will remind you that this subject of air conditioning, about which so much is written and said these days, was really started and sponsored right here in the textile mills of the South. That was back in 1906, when Stuart W. Cramer, a predecessor of the present Parks-Cramer Company, delivered his now famous address before the American Association of Cotton Manufacturers at Asheville, N. C. At that time he defined air conditioning as the combined humidifying, air cleaning, heating and ventilating of textile mills, public buildings, offices, schools, auditoriums, and the like, under automatic control.

Note that he placed textile mills first, for it was in textile mills that the air conditioning industry received its first impetus. It has been in textile mills that most of the improvements in the art of air conditioning have been initiated. You can feel justly proud of this fact.

Since air conditioning began in your mills, it was no more than reasonable that the types of equipment developed for maintaining and controlling atmospheric conditions in mills should have been called air conditioners. But today, in order to assist in the development of a much wider field of usefulness, a more restricted meaning is given to the term. No doubt you are acquainted with the terminology adopted a few years ago by the Air Conditioning Manufacturers Association in co-operation with the U. S. Department of Commerce and the National Better Business Bureau, which defines and distinguishes between "summer air conditioning," "winter air conditioning," and "year round air conditioning." Similarly in strict parlance, the term "air conditioner" is classified for summer or winter or year round use.

But the term air conditioning has for years been used in a general sense to refer to any needed change or control of atmospheric conditions in mills, and there is no objection whatever in continuing such use, provided its implication is not misleading.

With few exceptions, those engaged in the manufacture, conditioning or testing of yarns and fabrics, of cotton, silk, linen, wool, jute, hemp, rayon—in fact, any fibers of either vegetable or animal origin—find it desirable and even essential to maintain constant and uniform atmospheric conditions during much of the time. In particular, the control of relative humidity has been found beneficial. Although the extent and precisions of such control varies for different materials and processes, the requirements are sufficiently general to make the subject of atmospheric control comparable in importance to the proper selection of processing machinery.

Modern methods in textile manufacture which involve rapid manipulation of the fibers call for increased strength, toughness, and pliability to prevent breakage of

fiber and yarn. Such important considerations as rate of production, quality of the product, and economy in raw material are known to be influenced by moisture content or "regain" in the material. It is a well recognized fact that regain varies with the relative humidity (and to a slight extent with the temperature) of the air to which the material is exposed. Consequently control of atmospheric conditions has long been considered most essential to satisfactory and economical manufacture.

Apart from the actual manipulation of fibers during the manufacturing process, air conditioning is of recognized importance in the regulation of sizes and weights of textile materials and products. This is readily appreciated when you consider that the normal moisture regain (or percentage of water content compared to oven-dry weight of the material) ranges from less than 6 per cent. to more than 16 per cent. for various textile materials. The regain of any given material exposed to an uncontrolled atmosphere may easily double during the course of a single day, as the result of ordinary changes in weather conditions. When goods are bought and sold on the basis of weight, changes in regain result in serious losses to buyer or seller unless regain is allowed for in accordance with established standards. Atmospheric control, which serves to bring regain within satisfactory limits prior to weighting tests, is the approved method of forestalling such losses.

Another well-established purpose and advantage of air conditioning in the textile industry is the maintenance of improved conditions from the point of view of the health and comfort of the workers. For most departments and processes, temperatures and humidities most essential to satisfactory and economical manufacture fall within the range of conditions which, though not ideal, are suitable from the health standpoint. In those departments where moderately high or high relative humidities are needed, it usually is not necessary that temperature also be high. Consequently, if the method used for maintaining and controlling relative humidity serves simultaneously to keep temperature within satisfactory limits, a double purpose is served by the air conditioning equipment.

Modern methods of humidification differ greatly from old-time methods in respect to temperatures maintained. A properly designed system provides for evaporative cooling sufficient to absorb all heat from machinery or other sources liberated within the rooms served. It permits ample ventilation so that continuous evaporation of large quantities of water is possible. As a result, well-humidified spinning and twisting departments, weave rooms, etc., formerly considered to be unbearably hot during the summer season, are now maintained as cool as, and in many cases cooler than, the outdoor air. It would

*Address at Northern North Carolina-Virginia meeting of the Southern Textile Association at Leaksville, N. C., April 24th.

(Continued on Page 12)

Among Those Attending The Leaksville Meeting

The following men registered at the Leaksville meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association:

- Adkins, R. J., Overseer Weaving, Draper Sheeting Mill, Draper, N. C.
 Alexander, C. W., Overseer Spinning, The Erwin Cotton Mills Co., Cooleemee, N. C.
 Armfield, R. H., Supt., White Oak Mills, Greensboro, N. C.
 Arthur, W. J., Foreman, Sheeting Mill, Spray, N. C.
 Ashmore, Wm. G., Southern Editor, *Textile World*, Greenville, S. C.
 Ashworth, W. A., Follow-up Man, Blanket and Sheeting Mill, Draper, N. C.
 Barber, L. C., Overseer, No. 8 Riverside Cotton Mills, Danville, Va.
 Barton, W. P., Foreman, Suiting, Spray, N. C.
 Batson, C. B., Manager, Superintendent, Consolidated Textile, Lynchburg, Va.
 Bondurant, T. L., Second Hand, Spray Cotton Mill, Spray, N. C.
 Boyd, Chas. H., Superintendent, Spray Cotton Mill, Spray, N. C.
 Bradford, J. B., Overseer, Weaving, Martinsville Cotton Mill, Martinsville, Va.
 Brown, C. B., Ass't. Engineer, Duke Power Co., Charlotte, N. C.
 Burrus, P. H., Industrial Engineering Dept., Marshall Field & Co., Spray, N. C.
 Butler, R. A., Industrial Engineer, Marshall Field & Co., Spray, N. C.
 Campbell, I. E., Spray Cotton Mill, Spray, N. C.
 Cates, Willie C., Minneola Mfg. Co., Gibsonville, N. C.
 Childers, J. C., Designer, Erlanger, Erlanger, N. C.
 Childres, J. T., Card & Spinner, 2nd Shift, Minneola Mfg. Co., Gibsonville, N. C.
 Coffin, W. E., Section man, Minneola Mfg. Co., Gibsonville, N. C.
 Copland, J. R., Vice-President, E. M. Holt Plaid Mills, Burlington, N. C.
 Crane, Frank, Safety Director, N. C. Industrial Commission, Raleigh, N. C.
 Craven, R. K., Overseer Weaving, Minneola Mfg. Co., Gibsonville, N. C.
 Crowder, J. H., Second hand, Bedsread Mill No. 1, Leaksville, N. C.
 Davis, W. Leslie, Asst. Superintendent, Proximity Mfg. Co., Greensboro, N. C.
 Dickinson, G. C., Asst. Production Mgr., Marshall Field & Co., Sheeting Dept., Spray, N. C.
 Edwards, J. A., Machinist, Finishing Mill, Spray, N. C.
 Ellis, Ralph L., Foreman, Weaving, Blanket Mill, Draper, N. C.
 Farmer, J. C., Assistant Superintendent, Towel Mill, Fieldale, Va.
 Ferguson, O. F., Overseer Weaving, Sheeting Mill, Spray, N. C.
 Fonville, John C., Editorial Staff, *Cotton*, Atlanta, Ga.
 Gammon, W. E., Overseer Weaving, No. 8 Mill, Danville, Va.
 Gibson, W. L., Denim, White Oak Mill, Greensboro, N. C.
 Going, R. C., Bedsread Mill, Leaksville, N. C.
 Harris, Lee, Second Hand, Minneola Mfg. Co., Gibsonville, N. C.
 Hayden, N. W., M. N., Finishing and Bleaching Mill, Spray, N. C.
 Hill, I. A., Second Hand, No. 8 Riverside Mills, Danville, Va.
 Holt, E. M., Mgr., The Erwin Cotton Mills Co., Cooleemee, N. C.
 Hopkins, J. O., Spinning Foreman, Morehead Cotton Mills Co., Leaksville, N. C.
 Horabuckel, R. M., Foreman, Silk Mill, Spray, N. C.
 Howard, B. B., Quality Control Bureau, Marshall Field Mill, Leaksville, N. C.
 Howell, E. L., Designer, Nokomis Mill, Lexington, N. C.
 Hurst, Albert, Stock Hand, Rhode Island Mill, Leaksville, N. C.
 Inscow, J. W., Overseer Carding, Erwin Cotton Mills Co., Cooleemee, N. C.
 Jeffries, J. M., Fixer, Silk Mill, Spray, N. C.
 Jennings, W. J., Carder and Spinner, Minneola Mfg. Co., Gibsonville, N. C.
 Killelte, W. P., Asst. Overseer Weaving, Minneola Mfg. Co., Gibsonville, N. C.
 Lake, Marshall E., Power Sales Engineer, Duke Power Co., Charlotte, N. C.
 Lassiter, C. T., Penick & Ford Ltd. Inc., Greensboro, N. C.
 Latham, J. T., Indst. Engineering Dept., Marshall Field & Co., Spray, N. C.
 Lindsay, J. H., Superintendent, Finishing and Bleaching Mill, Spray, N. C.
 Lovell, R. L., Foreman in Weaving, Second Shift, Sheeting Mill, Spray, N. C.
 Mansfield, E. J., Foreman, Finishing Mill, Spray, N. C.
 Matthews, A. J., Overseer, Weaving, Bedsread Mill, Leaksville, N. C.
 May, A. E., Foreman, Marshall Field & Co., Suiting, Spray, N. C.
 May, G. H., Dyer, Proximity Mills, Greensboro, N. C.
 May, Howard, Fixer Tying in Dept., Proximity Mills, Greensboro, N. C.
 May, J. F., Second Hand, Minneola Mfg. Co., Gibsonville, N. C.
 May, Mack, Second Hand, Minneola Mfg. Co., Gibsonville, N. C.
 May, R. W., Second Hand, Beaming & Slashing, Tye-in Dept., Proximity Mills, Greensboro, N. C.
 McDonald, Glenn, Overseer Beaming & Slashing, Proximity Mfg. Co., Greensboro, N. C.
 McNeely, J. E., Supt. Finishing, Erwin Cotton Mills, Cooleemee, N. C.
 Moreland, R. C., Overseer Spinning, White Oak Mill, Greensboro, N. C.
 Nash, C. E., Overseer Weaving, Proximity Mfg. Co., Greensboro, N. C.
 Pegram, T. C., Supt., Erwin Cotton Mills, No. 3, Cooleemee, N. C.
 Perry, Horace, Spray Cotton Mills, Spray, N. C.
 Perry, W. N., Master mechanic, Bedsread Mill, Leaksville, N. C.
 Reid, H. J., Head loom fixer, Minneola Mfg. Co., Gibsonville, N. C.
 Rhinehardt, W. A., Supt. Office, Blanket & Sheet Mill, Draper, N. C.
 Richardson, W. H., Foreman, Sheeting, Marshall Field & Co., Spray, N. C.
 Ripple, J. H., Supt., Marshall Field & Co., Fieldale, Va.
 Rogers, C. T., Foreman, Silk Mill, Spray, N. C.
 Royal, B. Ellis, Associate Editor, *Textile Bulletin*, Charlotte, N. C.
 Rudisill, John A., Minneola Mfg. Co., Gibsonville, N. C.
 Rushworth, L. J., Superintendent, Riverside Cotton Mills, Danville, Va.
 Samuels, J. E., Foreman, Draper Sheeting Mill, Draper, N. C.
 Scott, John D., Overseer, spinning, Proximity Mills, Greensboro, N. C.
 Shannon, E. LeRoy, Second Hand Weaving, Riverside Mill, Danville, Va.
 Shumate, W. H., Overseer Weaving, Silk Mill, Spray, N. C.
 Simpson, Glenn, Second Hand, Finishing Mill, Leaksville, N. C.
 Skinner, David, Section man, W. W. S. Mill, Draper, N. C.
 Snow, G. B., Salesman, Atlanta Brush Co., Atlanta, Ga.
 Squires, W. J., Quality Control Staff, Draper Blanket, Sheeting Mills, Marshall Field & Co., Draper, N. C.
 Stewart, Jesse F., Card Grinder, Minneola Mfg. Co., Gibsonville, N. C.
 Strutton, Dan J., Foreman Weaving, Marshall Field & Co., Suiting Mill, Spray, N. C.
 Sutliff, Samuel, Loom fixer, Spray Sheeting Mill, Spray, N. C.
 Swing, W. H., N. M., Lexington Silk Mills, Lexington, N. C.
 Taylor, V. M., Foreman, Silk Mill, Spray, N. C.
 Taylor, W. C., Salesman, N. Y. and N. J. Lubricating Co., Greensboro, N. C.
 Thomas, J. O., Asst. Personnel Director, Marshall Field & Co., Spray, N. C.
 Turner, Robert Frank, Blanket Mill, Draper, N. C.
 Thomason, L. W., N. Y. and N. J. Lubricating Co., Charlotte, N. C.
 Tillet, E. C., Foreman Sheeting, Draper Mill, Draper, N. C.
 Turner, Morris, Foreman, Karastan Rug Mill, Marshall Field & Co., Leaksville, N. C.

(Continued on Page 25)



Problem PAGE

Devoted to Practical Questions and Answers Submitted by Our Readers

Flyer Lead or Bobbin Lead?

Editor:

Would like to hear from carders of experience on both flyer-lead and bobbin-lead fly frames, which is the best and why?

"TREASURER"

Answer To "Swivel Chair"

Why Not Higher Speed on Looms?

Editor:

I believe that I am qualified to give answer to "Swivel Chair" question as to why some looms will not operate during variations in speed.

All kinds of textile machinery are designed to run at some certain speed. All the machines throughout the mill are positive motions, except the loom.

In the loom it is always a question whether or not the shuttle will get through the warp and into the opposite box in time to raise the dagger above the frog steel to prevent the loom from banging off.

All adjustments of the pick motion, parallel, box motion and shuttle check motion must be made for some particular speed. When the speed goes up, the picking mechanism throws the shuttle with greater force and the boxes being set to check a lower momentum cannot hold it; whereas if the speed should drop below normal, the reverse is true. The pick motion will deliver less force to the shuttle, causing it to fail to go all the way up into the opposite box.

It is a difficult matter sometimes to get some of our superiors to understand that for a loom to do its best, it must have a reasonable, steady, even speed.

There is much more that can be said about this matter of speed, but I do not wish to tire you. However, if the above is not sufficiently clear, or if there are any other questions that you would like to ask, I am at your service.

"BEENTHERE"

Answer To "Second Hand"

(Is It Practical to Use Comb Guide—April 15th Issue)

Editor:

Yes, you can run your warp yarn No. 56s through the comb guide on spooler.

However, it is necessary to have the settings on the card properly made, so that the stock will be free of large pieces of foreign matter and oversize neps.

Another thing, and one of very much importance, is to have the cards stripped often enough to prevent as much foreign matter going through as possible.

If all the preparatory processes are doing their full duty from the bale breaker up to the spun yarn, you will have practically no trouble in running this yarn through the comb guide.

But if the stock is put through the picking and carding machines in a don't care manner, you cannot use the comb guide with any degree of satisfaction.

"SPOOLER"

Reply To "J. G. C."

(Power Transmission Problem)

Editor:

You can use a 5" single belt with perfect safety with your 30" diameter pulleys to give ten horsepower to the driven shaft.

Here is a rule to fit your question for an open belt:

$$\frac{240 \times 30 \times 3.1416}{12} = 1884.96 \text{ feet per minute traveled by belt.}$$

$$\frac{10 \times 900}{1884.96} = 4.77 \text{ width of belt single.}$$

You first find the feet traveled per minute by the belt, by multiplying the speed of the driving shaft by the diameter in inches of the pulley and by 3.1416 and dividing by 12, the inches in one foot.

Then multiply the horsepower by 900 standard and divide by the feet traveled per minute by the belt, and the last answer is the width of a single belt.

"POWER"

Reply To "Whorl"

(WHERE TO MEASURE WHORL OF SPINDLE)

Editor:

In trying to find the exact place to take the diameter of a spinning frame spindle whorl is almost as difficult as trying to find safe and sane reasons for packing our Supreme Court.

A very small band will run the spindle faster than a very large one, so you can see that it depends on the size of the band as to where to take the diameter. No arbitrary rule can be given.

You could not determine the exact speed of your spindle even if you had the exact diameter of the whorl, for you could not guess or find out otherwise just how much slippage there is between the cylinder and the spindle band, and between the spindle band and the whorl.

So why worry about the exact speed of the spindle? A few thousandths of a turn more or less means nothing.

"OFFICE BOY."

Air Conditioning in Textile Mills

(Continued from Page 9)

be possible to go further and provide for complete refrigeration of textile mills during the hot season, but the expense of such refrigerating equipment is not ordinarily justified in view of the degree of comfort now attainable with the highly perfected systems which combine high evaporative capacity with controlled ventilation, about which I shall speak again later.

The requirements for atmospheric control are so varied that many different types of air conditioning equipment can be used to advantage in the textile industry. No one type is suitable for all mills and in many cases two or more types of equipment are sometimes advisable, each serving one or more departments.

In mills where yarns are spun from natural fibers or where woven goods are produced from yarns of either vegetable or animal origin, humidification is the principal requirement. A system of direct humidifying usually is recommended. Close control of relative humidity is needed but temperature may vary within limits representing the range of comfort.

In knitting mills, both humidity and temperature control are desirable and the entire avoidance of free moisture in the room is a wise precaution. Cleansing of outdoor air before admitting it to the mill also is desirable. These are features of the central station system to which I shall refer again.

The manufacture of rayon and other synthetic fibers involves both temperature and humidity control at levels calling for cooling and dehumidification during most of the year. Dehumidifying equipment also is essential in testing laboratories where both humidity and temperature are constantly maintained within specified limits.

Automatic regulators for starting and stopping humidifiers, for controlling heaters, dampers, ventilating fans, etc., are of three principal types: (1) humidity regulators of the wet and dry bulb type, or psychrostats, (2) humidity regulators of the absorption type, or hygrostats, and (3) thermostats. In special cases a fourth type, the wet bulb temperature regulator, is used.

Thermostats may control heating, cooling, or ventilating equipment. In some cases they may be used to vary the maximum evaporative capacity of humidifiers in accordance with major demand requirements.

The wet and dry bulb humidity regulator or psychrostat is a highly perfected instrument which operates to control relative humidity regardless of temperature by actuation of a humidifier valve or other humidity influencing mechanism. The psychrostat contains two compartments maintained respectively at the dry and wet bulb temperatures of the room air and through which a sample of room air is drawn. Thermostatic metal bellows act differentially through leverage mechanism to close or open an air port, the resulting building up or release of pressure serving to actuate a relay valve which in turn opens or closes a main valve supplying air or water to the humidifiers.

The hygrostat contains a moisture absorptive or hygroscopic material, the elongation or contraction of which, with changes in regain as influenced by atmospheric conditions, acts through suitable pneumatic valve or electric

contacts to effect starting or stopping of the humidifiers. Some hygrostats are more sensitive and reliable than others, but all are influenced to some extent by temperature—especially sudden changes in temperature—and to aging of the hygroscopic element which should be calibrated frequently and renewed occasionally. Of the various animal and vegetable materials used for this purpose, the human hair has been found most reliable and sensitive over long periods of use.

Methods of calculating humidifying and ventilating capacities for textile installations have been highly perfected in recent years. Rules of thumb have been largely discarded in favor of exact mathematical calculations in all cases where thermal data are known or can readily be ascertained. These improved methods of calculation, coupled with improved design of the humidifying and automatic regulating equipment, have made it possible to secure more satisfactory and stable atmospheric conditions in all mill departments with consequently greater return on the invested capital.

No longer is it satisfactory to install an arbitrary number of units or pounds of water per hour for each unit of volume in a mill and department of stated character. Instead we secure accurate data on the amount of heat to be absorbed (including heat from motors and processing machines, lights, people, and from outdoors) at the required atmospheric conditions. With these as a basis, the required evaporative capacity and frequency of air changes are computed. Outdoor conditions against which capacities are desirably figured are ascertained from a summary of Weather Bureau statistics covering a period of many years.

In establishing desirable limits of temperature, humidity and air movement from the point of view of comfort and efficiency of the workers, research data on "effective temperature," published in the Transactions of the American Society of Heating and Ventilating Engineers, have been used to advantage. These limits have been checked by numerous mill tests. In this connection distinction between ideal and commercial limits of comfort should not be overlooked.

The principal types of air conditioning equipment suitable for textile mill use include locally distributed humidifiers of various sorts as well as central station systems.

The essentials of a good direct humidifying system are:

1. Adequate total evaporative capacity.
2. Ample number of humidifying units or moisture outlets, so the conditions may be maintained with a close degree of uniformity when the system is operating at either light or peak load.
3. Satisfactory performance of each unit. Fixed capacity over a long period without undue accumulations of lint, etc., requiring cleaning. Good quality of spray with absence of coarse particles.
4. Dependable and accurate system of automatic regulation with regulators located in working area of the room at representative points such that conditions can be maintained uniformly without local variations, and constantly regardless of weather changes, starting and stopping of mill machinery, etc.

(Continued on Page 16)

Traders Expect Early Resumption of Large Scale Buying

(Continued from Page 8)

Merchants in New York believe that there is something more to worry about than mere organizations or even legislative developments. Costs have already risen to levels which have induced some worry as to whether the finished goods can be merchandised successfully. It is felt that the 80 square print cloths, for example, can sell at up to around 11 cents a yard without disturbing the distribution of 80 square percales. Anything much higher than this, however, is likely, it is feared, to cause many garment manufacturers to switch to lower constructions. The goods can now be bought in the gray at around 9 $\frac{3}{4}$ c for early delivery but this figure is based on present costs and on present raw cotton, and on that basis does not leave any huge margin for mills.

The possibility exists that the recent weakness in raw cotton, like that in other commodities, is a temporary halt in a general upward trend. Cotton at around 16 cents or higher for New York spots would carry 80 squares beyond 11 cents a yard even at present labor costs. Any substantial increase in labor costs would do the same thing.

With these considerations in mind, some merchants are giving a lot of thought to the problem of selling far forward deliveries of standard constructions. They do not like to commit their mills to the manufacture of constructions which might by the last quarter of the year swing into lower consumption.

The market for sheetings and several similar coarse goods numbers remains very strong, with mills sold solidly ahead and with prices well maintained. There have been few advances in recent weeks, however.

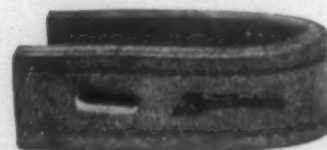
Fine yarn gray cloths, after holding up well for a long period, swung into a minor decline during the first part of April as a few mills began to accept business at less than general quotations. Many mills have continued to refuse to meet these low prices, however. There remains a likelihood that with some fair buying in May, prices may swing back to former levels. Meanwhile, the great majority of mills have a great deal of business on their books and are now pushing sales.

Fancy goods have been sampled to some extent for spring, 1938, but this has not gone forward rapidly. Some traders believe that the number of new cloths developed for the next spring season will be small. They point out that many mills have their fancy goods looms tied up on staple fine goods, for which there was a good market some weeks ago. Others are turning out summer and fall fancies on contract. This leaves little equipment available for sampling operations.

TEXTILE LEATHERS
bearing the name
ORIGINAL and GENUINE
Bondaron
REG. U. S. PAT. OFF.
"The Leather with the Hair On."
LAST 2 to 5 times LONGER

ORIGINAL and GENUINE
Bondaron
REG. U. S. PAT. OFF.

LUG STRAPS



not only OUTWEAR
ordinary straps but

REDUCE PICKER STICK BREAKAGE

A number of mills report that the use of **Bondaron** Lug Straps has materially reduced their breakage of Picker Sticks. That is easy to understand. The same tanning process that produces such great tensile strength in **Bondaron** Leather also gives it an unusual degree of softness and pliability. This softness and pliability of **Bondaron** Lug Straps, when used to pull the Picker Stick, acts as a shock absorber to cushion the blow and thus prolongs Picker Stick life. Try them in your own mill!

CHARLES

Bona
COMPANY

Philadelphia, Pa.

617-623 Arch St.

Manufacturers of Textile Leathers
for Nearly Half a Century

Personal News

Hardin Stark, of the Dominion Textile Company, was recently elected president of the Pine Bluff Rotary Club.

W. S. Durham has been promoted to overseer of the filling spinning at the Eureka plant of the Springs Mills, Chester, S. C.

J. H. Robbins has been promoted to overseer of the warp spinning, spooling and warping at the Eureka plant of Springs Mills, Chester, S. C.

J. Y. Jones, superintendent of the Newberry Cotton Mills, has been elected president of the Rotary Club of Newberry, S. C.

J. M. James has resigned as overseer of weaving and cloth room at Entwistle Mills No. 3, Rockingham, N. C., and is temporarily living at 1835 N. Allen street, Charlotte, N. C.

Joe Sanders, who has been superintendent at the Springstein plant for the past five years has been transferred to the Gayle plant of the Springs Mills, Chester, S. C., to be superintendent of that plant.

S. H. Jordan has resigned his position with the Wenonah Mills Nos. 1 and 2, Lexington, N. C., and has accepted a position with the Roanoke Weaving Company, Vinton, Va.

C. W. Wilbanks has been promoted to superintendent of the Springstein plant of Springs Mills, Chester, S. C. He was formerly overseer of spinning at the Eureka plant.

LaFayette Lanier III has been named superintendent of the Riverside Mill at Riverview, Ala., succeeding the late Thomas J. Goggans. Mr. Lanier is a graduate of Georgia Tech and a grandson of the late LaFayette Lanier, Sr., pioneer textile manufacturer.

A. B. Alexander, Jr., has been appointed superintendent of the Shelbyville Mills plant of U. S. Rubber Products, Inc. He graduated from Georgia Tech in 1931, and has been with U. S. Rubber since that time, and has been acting as superintendent since the death of H. H. Ocheltree in October, 1936.

Walter Gayle At Gibraltar



The above is a picture of Walter Gayle, Southern representative of the Saco-Lowell Shops, and Mrs. Gayle, at Gibraltar. Mr. and Mrs. Gayle are on a trip to Europe and sent us this photograph on a post card mailed April 12th.

D. J. Gardner, superintendent Myers plant of Textiles, Inc., and Ridge Mills, Gastonia, N. C., is improving after undergoing an operation at St. Peter's Hospital in Charlotte.

Claude Kay has become superintendent of the weaving divisions of the Pelzer Manufacturing Company's Nos. 1, 2 and 2 units, at Pelzer, S. C. He was formerly of Draper, N. C.

R. T. Staples is now superintendent of J. W. Sanders Cotton Mills, Meridian, Miss. He was formerly assistant superintendent of New Braunfels Textile Mills, Inc., New Braunfels, Tex.

J. J. Davis has accepted a position as overseer spinning with the Selma Manufacturing Company, Birmingham, Ala. He was formerly with J. W. Sanders Cotton Mills, Meridian, Miss.

T. H. Burkhart, formerly vice-president and general superintendent of the Burlington Mills, Burlington, N. C., has accepted the position of general superintendent of the Cleveland Cloth Mills, Shelby, N. C.

Marshall Dilling, Jr., son of the superintendent of the Ranlo Manufacturing Company, Gastonia, N. C., is included in a list of students who have made honor grades at N. C. State College.

Donald Comer, head of the Avondale Mills and president of the American Cotton Manufacturers' Association, has been elected to the board of directors of the Ocean Steamship Company of Savannah.

J. Harvey White, president of the Travora Manufacturing Company, Graham, N. C., has returned from a six weeks' visit to Mexico. He was accompanied by Mrs. White.

M. D. Maney, for 40 years associated with the textile industry and for the past eight years superintendent of the silk mill, which is Unit No. 3 of the Republic Cotton Mills, Great Falls, S. C., has resigned from his position.

P. C. Storey, who has been manager of the Randtex Mills, Inc., Naomi unit, at Randleman, N. C., which has been closed down, has been transferred to the Faytex Mills, Inc., Lakedale, N. C.

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Robert B. Riddle, of Birmingham, Ala., is now overseer carding, J. W. Sanders Cotton Mills, Meridian, Miss.

W. N. Darby, who was for years superintendent of the Alpine Cotton Mills in Morganton, N. C., has become superintendent of Kinston Textile Mills, at Kinston, N. C.

John A. Law, president of Saxon Mills, delivered the principal address as founder's day was observed at Converse College, Spartanburg, S. C. The college is named for Dexter Converse, pioneer textile manufacturer of this section and organizer of the Clifton and D. E. Converse mill companies.

J. D. Sandridge, of the Du Pont Company, is tournament chairman for the Annual Men's Invitation Golf Tournament which will be held at the Charlotte Country Club, May 6th, 7th and 8th. The course, which is one of the finest in the South, will be open for practice rounds beginning May 3rd.

John Volk has arrived at Belmont, N. C., from Guelph, Canada, to take charge of a department of the Aberfoyle Manufacturing Company. Mr. Volk was formerly at Belmont, and was transferred from the local unit of the Aberfoyle Manufacturing Company to the unit in Canada a year or more ago.

N. C. Division of Southern Textile Association To Meet in Raleigh

The Eastern Carolina Division of the Southern Textile Association will hold its Spring Meeting at N. C. State College Textile School, Raleigh, May 1st, at 10 a. m.

Guest speakers include Wm. McL. Fraser, assistant general manager of Howard & Bullough American Machine Co., on "New Development in Textile Machinery," and R. W. Philip, editor of *Cotton*, in an informal talk on the sidelights of his trip to Japan.

P. B. Parks, Jr., chairman, urges all operating executives and members to attend. This promises to be a very entertaining and instructive meeting and should prove highly valuable to those attending.

Coming Textile Events

MAY 1

Eastern Carolina Division of the Southern Textile Association meeting at the Textile School of N. C. State College, in Raleigh, N. C.

MAY 12-13-14

American Cotton Manufacturers Association will hold their annual meeting at the Mayflower Hotel, Washington, D. C. Board of Governors meet May 12.

May 14-15

National Rayon Technical Conference, at Washington, D. C.

MAY 31 - June 5

National Cotton Week. Seventh Annual Observation.

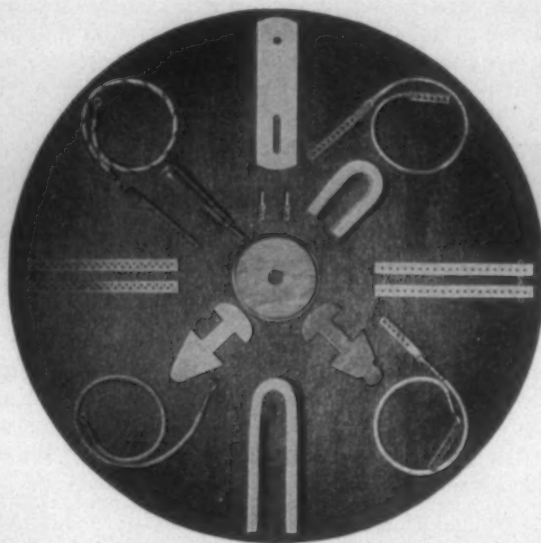
JUNE 3-4

Cotton Manufacturers Association 37th annual meeting, at the Cloister Hotel, Sea Island, Ga.

June 11-12

Southern Textile Association annual meeting, at Ocean Forest Hotel, Myrtle Beach, S. C.

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Air Conditioning in Textile Mills

(Continued from Page 12)

Humidifiers of the direct type include atomizers, centrifugals, and high duty humidifiers. Turbo atomizers operated by air under pressure. The jet of air induces a flow of water through an adjoining orifice concentric with the air port. These humidifiers are simple in construction. They deliver a fine spray directly into the room to be humidified. Numerous units of relatively low capacity are advantageously located to provide ample total capacity with uniform distribution of moisture. They can be used satisfactorily in high or low posted rooms and are particularly suitable where belts or other obstructions would interfere with larger types of humidifiers. The performance of atomizers is unaffected by lint, dust, or other atmospheric impurities. A recent development in humidifiers of this type consists of the addition of automatic self-cleaning mechanism which causes both air and water ports to be cleaned of dirt and oil deposits each time the air pressure is shut off by actuation of the automatic controls.

Centrifugal humidifiers also are locally distributed. Each consists of a motor-driven disk which causes water supplied at low pressure to be thrown against a series of teeth or corrugations thereby being broken into spray which is discharged into the room by the aid of a fan. When such humidifiers are designed to deliver spray in all directions, they have evaporative capacities two or three times as great as atomizers. The performance of centrifugal humidifiers is somewhat affected by lint and dust in the air. Use of such units is ordinarily confined to small installations and where the air is relatively clean.

So-called high duty humidifiers operate by water under high pressure. They, too, are mounted overhead in the room to be humidified. Spray is generated within a casing below which is a pan which catches the unevaporated spray. The unused water is drained to a central filter tank from which it is re-pumped to the humidifier nozzles. Above each unit is a fan which delivers air partly through the spray and partly down the outside of the casing. The force and proper portioning of the air currents account for the high evaporative capacity of this type of humidifier—greater than that of any other unit which sprays directly into the room air. The high duty humidifier is capable of satisfactory performance at capacities up to 10 gal. per hour or 5 to 10 times the capacity of humidifiers of the atomizer type. This is the most economical type of humidifier for large installations. It is particularly adaptable to hot spinning and twisting departments where high evaporative cooling is essential to comfort.

The central station air condition system consists of a centrally located spray chamber through which air from outdoors or re-circulated from the mill is drawn by a large pressure type fan. After being washed and saturated, the air with or without subsequent heating is delivered through a duct system to the room or rooms served. By controlling the volume of air, the temperature of the spray water and degree of heating, any desirable condition of humidity and temperature may be attained. This type of system is essential where complete control of conditions is needed. It can be designed to include any desirable function in atmospheric control. In the textile

industry the central station system is particularly adapted to installations which involve close control of temperature as well as relative humidity and especially where exceptional cooling or dehumidification is needed, in which case refrigeration is a necessary adjunct.

Automatic regulation may be simple or complicated, depending upon the number of rooms to be treated and the required condition in each.

Small installations of the central station type are useful for controlling atmospheric conditions in "conditioning rooms" where textile yarns or fabrics are treated for short or long periods.

In recent years the use of atmospheric control equipment in textile testing laboratories has steadily increased, with resulting improvement in the accuracy of test data and the elimination of inconsistencies and misunderstandings. Apparatus for controlling relative humidity is simple and not unduly expensive. A system of humidifiers of the Turbo atomizers type is satisfactory for the purpose, and many well-known laboratories are so equipped. Automatic regulators of the psychrometric wet and dry bulb type are preferable to the hygroscopic on account of the unavoidable variations in temperature during summer weather and the need of careful and frequent checking and readjustment.

Recent improvements in apparatus of the central station type suitable for the conditioning of textile testing laboratories have resulted in a rapidly increasing number of such installations. An automatically regulated atomizer system may be preferable to a central station system without refrigeration, but complete air conditioning with refrigeration makes an ideal installation for combined humidity and temperature control. Constant and accurate regulation of conditions in the test room has advantages which are considered by many to justify fully the added expense of the complete system. With such a system, tests may be made on hot humid summer days, when frequently it would be impossible without the refrigerating equipment to maintain atmospheric conditions corresponding to established standards.

In the old days humidification was little more than a makeshift—crude methods, even sprinkling the floor, were resorted to as a means to allay static.

Then humidifiers were gradually developed. Early types had too little evaporative capacity and were installed too sparsely to require or permit automatic regulation, but the advantages of the higher humidities they were able to produce became evident at once. Not only was static greatly lessened, but increased moisture content in the yarn improved strength and pliability, lessened waste, improved production and quality. Mill men became "regain conscious."

Development of the regain idea led to further improvement in humidifiers; capacities were increased and installations were made on a more generous basis. The natural result of having sufficient capacity for severe weather was to have more than enough in mild weather. Necessity is the mother of invention, so automatic humidity regulators were developed—first the Hygrostat, later the Psychrostat.

Then followed a period of improvement in textile machinery and building design. Speeds of all machines were

(Continued on Page 22)

Air Conditioning Discussed At Leaksville Meeting

(Continued from Page 7)

3, Cooleemee, N. C.: I want to ask Mr. Henderson if your company has made any new developments on conditioning in the picker rooms.

Mr. Henderson: No, sir. We have conditioning in some picker rooms, but we have used direct humidification, or heads, and in some cases turbo-humidifiers. It takes a lot of humidity there because of the rapid air change. So far as our company is concerned, we have no new developments. Some of the mills have worked out a system for recirculating the air, but we have nothing new. In fact, we have conditioned only two or three, and that was several years back.

Chairman: I should like to supplement that by saying that the air circulating in the picker room is taken care of at the present time by what is known as an air cleaner, which several of the companies are putting out. The air just recirculates in the room.

Mr. Henderson: I imagine it takes a lot of cleaning to keep the lint out of those air cleaners, doesn't it?

Chairman: If they are cleaned out four times a day that takes care of the situation very well.

Do you heat your water in extreme cold weather?

Mr. Henderson: You mean in the central humidifier tank?

Mr. Rushworth: Yes.

Mr. Henderson: It depends on the type of mill. We recommend it for weave mills, but where you have only spinning and twisting it is not necessary. The water passing through the humidifiers picks up sufficient heat in those hot departments, you see.

Mr. Holt: In a spinning mill, would you or would you not recommend a humidifying system?

Mr. Henderson: Of the central-station type?

Mr. Holt: Yes.

Mr. Henderson: Oh, yes.

Mr. Holt: You would not in a weave room?

Mr. Henderson: Oh, yes, but in a weave room you have to have local humidifiers with it. The central station by itself will not humidity much over 65 per cent. That would be about the maximum. If you want anything over that you have to supplement it.

Chairman: We had a system that we supplemented in that way, Mr. Holt. We had a mill that was originally equipped with another system, and we later, in order to get up the percentage of humidity, added a different circulating system, with heads.

Mr. Henderson: We have put in quite a number of them. The rayon people use them, too. They have an atomizer head right at the outlet.

Mr. Gammon: If your temperature is running low—say you drop to 68 or 70 on your dry bulb, would it not force more water into the room to build up the proper percentage of relative humidity?

Mr. Henderson: No, at a low temperature, that would be an indication that you did not have a whole lot of heat, and, secondly, the humidifier capacity would be cut down to give you the proper humidity. If you have a high temperature the humidifier heads have to run full

blast to lower the temperature and give you the proper amount of moisture.

Mr. Gammon: My experience has been that where the temperature cools down the more the heads run.

Chairman: That is in a type of concrete building. I think the lower temperature there was due to the output of heat. In other words, his question was, is there a larger output of water with low temperature?

Mr. Henderson: I should think it would be the other way around, unless the large output of water has reduced the temperature. I do not know that I quite get the question.

Mr. Gammon: My observation is that the heads do not seem to come on so often where you keep the temperature up around 78 or 80 as when it drops down to 68 or 70 or 72.

Mr. Henderson: Are you speaking of winter time conditions outdoors?

Mr. Gammon: Yes.

Mr. Henderson: I can not imagine what would cause that, unless you introduce an excessive amount of outside air which will cause it, because in the winter time there is not sufficient grains of moisture in the outside air.

Mr. Gammon: I think that is the point right there.

Mr. Henderson: Yes, I think so; I think you are bringing in an excessive amount of outside air.

Chairman: Thank you very much, Mr. Henderson.

Mr. Thomas, have you any announcements to make?

J. O. Thomas: We have prepared for a luncheon in the cafeteria in this building, which will be served by the Junior Service Guild, and we shall be glad to have as many of you present there as possible. After the luncheon there will be an address by Mr. Robert West, of Danville, on "Trends in the Textile Industry." There will also be some entertainment features during the luncheon—tap dancing, etc.

Chairman: I certainly hope everyone who can will stay for the luncheon, because I think you will have a nice time.

I also wish to ask the members to send in to the executive committee of the Division, at any time prior to the fall, any questions they wish discussed at the next meeting. At times it has been the practice of the executive committee to mail a list of questions to the members. Then again the committee, in talking over these matters, has felt that if they pin the discussion down to this list of questions there might be something else that some member might have wanted to bring up at the meeting. So we follow different plans at different times. If you have any questions you want discussed, send them in to Mr. J. O. Thomas, in care of the Marshall Field Company, Spray, N. C.

Mr. Culver Batson, a former president of the Southern Textile Association, has just stepped into the room. We shall be glad to have a word from him. Have you anything to say at this time, Mr. Batson?

Culver Batson, Consolidated Textile Corp., Lynchburg, Va.: Only that I am hungry, Mr. Chairman. (Laughter.)

Chairman: We will adjourn now for lunch.

(The meeting adjourned at 12 o'clock noon.)

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Too Many Spindle Hours

THE Census Bureau reports that cotton mills in the United States operated 9,698,368,000 spindle hours during March.

In January, 1923, we reached 9,274,137,000 spindle hours and as the result of that overproduction had to go into many months of curtailment which did not cease until August, 1924, when the bottom was reached at 5,434,436,000 spindle hours.

In March, 1927, we reached 9,638,035,000 spindle hours and that overproduction forced a curtailment until we went down to 6,251,145,000 spindle hours in July, 1928.

In January, 1929, we reached 9,226,738,000 spindle hours and held very near that figure until October, 1929, when there were 9,005,849,000 spindle hours.

After that period of overproduction there were many months of part time operation for mills.

When our cotton mills are operating upon the basis of 9,698,368,000 spindle hours per month they are overproducing, in our opinion.

Overproduction will mean goods in excess of consumption and that eventually means goods sold at lower prices, probably at prices below cost.

Overproduction for a few months may also mean idleness for many months, for thousands of our cotton mill operatives who can not find employment when textile machinery is idle.

Any such rate of operation as was indicated

for March, 1937, has always been the forerunner of low prices for goods, operating losses and idleness for mills and distress for employees.

Will the lesson never be learned? Will the blind always be blind?

The Serpent Enters the Garden

MOST mill employees are well versed in the Bible, hence the story of Adam and Eve in the Garden of Eden is very familiar. They know the story of the happiness until the serpent entered and with his wily arguments destroyed those conditions of contentment and happiness.

No one is trying to compare present conditions in the textile industry to the Garden of Eden, and yet the conditions within the industry are reasonably satisfactory.

The work is regular, the wages are good and getting better, the hours are reasonable; in fact, no industry has shorter hours, the living and working conditions are good, the prospects for these conditions to continue are good, and yet the serpent of C. I. O. comes gliding in with his oily tongue and persuasive platitudes and urges the workers to follow him.

Industrial relationships in the textile industry of the South are good. Employers and employees enjoy cordial relationships. They were born in the same environment and grew up together. They know each other and are living a perfectly normal life. The C. I. O. glides in, however, and says that this is not normal; that the normal thing is to give them intervening powers. Industry and labor are man and wife and must live in congenial relationships, or the family can not exist. There is no family of common interest where the third party intervenes.

A careful analysis of who this third party is and its purposes is all that is necessary to find out whether it is worth while considering. These onslaughts on the Southern textile worker have been coming down for years and after the confusion has subsided, it has always been found out that the organizers got the profits and the workers got the losses.

Business is good in the South now and there is a lot of good easy money, hence the boys are coming down to take up another collection. They have a new policy this time. They are smooth tongued politicians who draw beautiful pictures of what they can do and what they will do. No dues are required to join, you simply sign on the dotted line. There will be no strikes or loss of time. Everything is lovely. These are the ensnaring words to get the noose around the workers' necks and when they once have sufficient members they will begin the dirty work.

It is beautiful psychology. It is the snake charming the bird.

This C. I. O. is such an unnatural situation that it can not last. It will pass as many other wild schemes of American life have passed. In the meantime, the workers will suffer all of the tragedies and pay all of the bills.

It is very desirable to look through a proposition and try to see what the final results will be. Are they desirable? Is it a passing show? We think this is a sporadic effort to enrich the coffers of a group of organizers. It is significant that all of the higher-ups and highly paid men among the C. I. O. organizers are printers. Few textile men are being given jobs as organizers. These people are salesmen of the type who come through selling oil stocks, gold bricks and many other fanciful commodities of the get-rich-quick type. They work one territory and then they go on to the next.

As we have traveled over the Southern areas, we have been impressed by the fact that so many employees look with suspicion upon this C. I. O. movement. The newspaper accounts of how the workers are joining and our observations do not coincide. It seems to us that the workers are getting wise to what is happening and are giving it the "gate." It may be true in a locality here and there when there is an extra good salesman and some of the workers have not had the experience of being upset by these outside interests, there is a nest or nucleus, but by and large, over the industry the workers seem to prefer to be let alone and let them work out their own salvation without the aid of outside help.

When the next depression comes with its periods of idleness and part time operation, there will be time to study the C. I. O. and to listen to their organizers, but the sun of full-time operations and good pay is shining and the cotton mill employees seem to feel that the present moment is the "time to make hay."

Destroying Mill Baseball

WE have been very much interested in recreation and amusements for cotton mill people and have seen baseball and basketball as very healthful and wholesome influences.

We believe, however, that such sports should be primarily for the mill employees and are afraid that the present policy of some mills in hiring a large number of outside baseball players, in order to produce a winning team, is going to injure if not entirely destroy mill baseball.

Some mill companies went to great expense last year and are preparing to do the same this year in order that their baseball teams may be

able to defeat those of neighboring mills, but the hiring of professional or college baseball players prevents the participation of the mill boys, many of whom can be developed into excellent players if given the opportunity.

We have in mind a group of North Carolina mills which started out some years ago with baseball teams composed of mill boys and for several seasons there was intense interest in the teams.

One mill brought in several professional players and then others felt obliged to do likewise, in order to compete, and eventually the mill teams with the exception of a few players were composed of professional players including a number of former big leaguers.

Not only did the expense grow too great for the mills but the mill employees lost interest in seeing outsiders play and baseball was abandoned. Those mills have now had no baseball teams for a number of years.

A sporting goods man who is sincerely interested in the development of cotton mill baseball says that the following should be the rules:

- (1) Not more than two players who were not regularly employed by the mill prior to March 1st.
- (2) Not more than two college players, such college players to be doing bona fide summer work in the mills beginning not later than June 15th.

Many mills do not have competent pitchers and catchers and the "two outsiders" rule will permit them to be secured.

There are quite a few college boys, including textile students, who expect to follow cotton mill work and when they are doing bona fide work in mills they should be permitted to play.

Under reasonable restrictions which will reduce the expense of cotton mill baseball and permit regular employees to have a chance to play on the team, baseball will grow in mill communities and have a wholesome influence.

It is our opinion that those mills which hire professional baseball players in order to have a championship teams will receive very little for their money except an empty title and that they have lost sight of far more important factors.

Steel Did Not Recognize

THE agreement which the U. S. Steel Corp. signed with the C. I. O. has been grossly misrepresented. They did not adopt any closed shop policy. They only agreed that the C. I. O. should be the collective bargaining agency for those steel workers who were members of the C. I. O.

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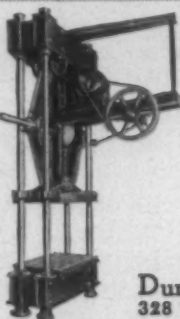
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Mill News Items

MORGANTOWN, W. VA.—Announcement is made that the Raritan Shirt Company will start operations at its new plant in Morgantown May 3rd. It is understood that approximately 100 persons will be employed.

MT. HOLLY, N. C.—The addition to the Woodlawn Mill costing \$35,000, was recently completed and will enable the mill to increase its production about 50 per cent. The Woodlawn is a unit of the American Yarn & Processing Co.

CHARLOTTESVILLE, VA.—At the Albemarle Weaving Company, manufacturers of upholstery and drapery fabrics, ground has been broken for an addition. The new building will house equipment which is scheduled to double the capacity of the plant. At present there are 80 looms.

MERIDIAN, MISS.—Work is progressing rapidly on the new 100x50 foot addition to the J. W. Sanders Cotton Mills. This is of brick construction, three stories high. When completed, additional spindles will be installed to bring their total to 25,000. Twenty cards and 100 additional looms will be installed.

TROY, N. C.—After having been idle for around four years, the Capelsie Cotton Mills, which were purchased several weeks ago by Leon Capel, have been put into operation. About 100 workers are on the payroll.

Mr. Capel is owner of the Capel Rug Mill, which manufactures braided and woven chenille rugs and rope.

STANFIELD, N. C.—Excella Hosiery Mills, Inc., which proposes to make yarns, cloths and textile fabrics, has received a charter from Secretary of State Thad Eure at Raleigh, N. C. The authorized capital is \$100,000, with \$10,000 stock subscribed by Brooks Jerome of Wade, N. C., and L. R. Furr, T. B. Love and L. R. Wagner, all of Stanfield.

SHELBY, N. C.—At the Belmont Cotton Mills Company, fire destroyed a warehouse and approximately \$600 worth of bagging, cotton wastes, and other materials recently. The loss is partially covered by insurance.

The warehouse was located a short distance from the main building, and the operatives kept the machines of the plant operating during the fire, thus avoiding any curtailment of operations.

MARION, N. C.—At the Marion Knitting Mills, work on a one-story addition, measuring 20 by 40 feet, for office space, has been completed. This addition will give increased space for the looping division.

Additional machinery has been installed, which includes the replacement of 60 of the old model machines with automatic knitting machines and this has increased the output of the mill from 1,800 to 2,200 dozen pairs of men's hose per day. Also three new Fidelity four-feed automatic ribbers have been installed.

Mill News Items

GRAHAM, N. C.—Work has been completed on the installation of three additional Einseidel-Reiner 45-gauge leggers in the Scott Hosiery Mills.

This addition makes a total of 25 full-fashioned machines for these mills, and has increased the production of the mills 400 dozen per week, making a total weekly production of 2,500 dozen.

FAYETTEVILLE, TENN.—Work is going forward on the construction of a building to house a new garment manufacturing plant. The cost of the building will be approximately \$80,000. The building is being financed by the town of Fayetteville. The money was raised before the contract was awarded for the building, and is on deposit. The building is scheduled to be completed by June 1st. It will be two stories, of concrete construction.

BIRMINGHAM, ALA.—Alabama Mills, Inc., operator of several cotton mills in Alabama, reports net income of \$365,670 for the 37 weeks from June 13, 1936, to February 27, 1937, with orders on its books that will keep the plants going until August 1st.

Results of operations in the period covered by the report and business in sight indicate resumption of interest payments on the 6 per cent debentures and probable dividend distribution on the common stock after June 30th, the report states.

The financial statement on the balance sheet as of February 27th shows net sales since June 13th of \$5,225,306, and manufacturing cost, selling, administrative expenses and interest, \$4,790,543, and net income before depreciation, of \$434,763.

ASHEVILLE, N. C.—Machinery installed in a portion of the additions to the textile buildings of the American Enka Corporation has been placed in operation.

Most of the 100,000 square feet of additional floor space provided by the additions will not be utilized at once, but will provide means of expansion as needs warrant, officials pointed out.

The additions were made principally to meet the increasing demand for yarn on cones, explained A. J. L. Moritz, vice-president of the corporation. The chemical and spinning facilities were not increased and only a comparatively few additional employees placed on the payroll.

DANVILLE, VA.—Directors of the Riverside and Dan River Cotton Mills voted April 17th to dispose of the last of an accumulation of deferred dividends on preferred stock, which should have been paid to the shareholders January 1, 1934.

The dividend, payable May 1st to stockholders of record of April 20th, will amount to \$3.60 per share; that is to say, \$225,000 principal and \$45,000 accrued interest making a total of \$270,000.

The textile corporation passed its dividends regularly during the depressed era but last year began redeeming them through better earnings.

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ASHEVILLE, N. C.

Air Conditioning in Textile Mills

(Continued from Page 16)

increased. Individual motors replaced line shafting driven from a power plant. Use of steel lessened the thickness of building walls. Glass area was greatly increased. Mills were built much wider.

These changes, though helpful to general mill economy and efficiency, all tended to increase room temperature. Required humidifying capacity increased with each increase in the amount of heat to be neutralized. Mills called for more and larger humidifiers and "better regulation" in order to maintain proper humidity and to keep room temperature within bounds.

In some cases central station type of humidification was resorted to. This system, when designed for ample capacity, gave excellent results except that humidity control lacked flexibility. Unfortunately also, the system was much more expensive than other types of humidification, and consequently, its use has been confined largely to cases where additional functions can be used to advantage, such as close temperature control, complete absence of free moisture, dehumidification, refrigeration, filtering.

Further improvements were made in direct humidifiers and automatic humidity regulators during this period, but in spite of their apparent perfection they lacked complete effectiveness.

Up to this time, ventilation had been left pretty much to chance. The importance of air change was realized, but dependence upon weather and manual adjustment of transom or window openings proved unsatisfactory. Transoms were opened on warm days. During mid-summer weather windows were thrown open promiscuously.

Since weather and winds are very changeable, any adjustment of natural ventilation which is satisfactory one moment becomes highly unsatisfactory a short while afterwards. The impossibility of proper control of ventilation by manual methods is well known to overseers and superintendents of hot textile mills.

What happens is this: when ventilation is excessive, humidifiers stay on continuously, but fail to provide sufficient evaporation to keep relative humidity up; room temperature stays high on hot days, humidity low.

If you restrict ventilation so that humidification becomes adequate, pretty soon humidifiers will be shut off by the automatic regulation; relative humidity may be satisfactory, but both dry and wet bulb temperatures become excessive. Full capacity of the humidifiers for evaporative cooling is not being realized. "Effective temperature" is high.

This natural ventilation is seldom satisfactory; it is either excessive or insufficient. If excessive, relative humidity suffers. In either case, room temperature is objectionably high in summer.

Another serious situation develops—namely, irregularity in room conditions. Air entering the room at the side moves irregularly inward picking up heat as it goes. The center of the room becomes very hot and correspondingly dry. Dry spots often occur also near the windows where dry air enters in large quantity.

During still weather natural ventilation is insufficient

even with generous window openings. At other times even moderate openings result in excessive ventilation and irregular air currents.

And so the next logical development has been undertaken, namely, automatic control or air change and forced distribution of air through mill interiors. A tremendous improvement in humidity and temperature is realized by this latest development in the air conditioning art.

Early forms of this automatic air changer system consisted of fan chambers placed at the walls which drew in air without distributing duct work. This type proved satisfactory only for narrow rooms. It was found that for uniform conditions, air must be distributed evenly to all parts of the room, and provision must be made for re-circulating room air when air change is not needed—as in cold weather.

The novelty of this system lies not in the use of fans—for they have been used before. Nor in the ducts which carry the air to various parts of the room—for they are a regular part of central station air conditioning. It is the combination of controlled air change and direct humidification under joint humidity regulation.

Relative humidity is maintained constantly at the desired level. Temperature is uniformly low because full evaporative capacity is utilized. Spotty conditions are eliminated because air is distributed evenly throughout the room and because room air is under a slight pressure relative to outdoors.

Automatic control is flexible. The expense of the system is only moderate.

These important developments in air conditioning of textile mills have been made in response to the needs and demands of textile men. Improvements in manufacturing economies and in quality of the products are in a large measure attributable to foresight in encouraging machinery manufacturers to introduce new developments which have always been adopted.

W. Clark Erwin Transferred To Atlanta

W. Clark Erwin has been transferred from the Charlotte office of the Reeves Pulley Company to their Atlanta office, where he will devote his time to variable speed installations. Mr. Erwin is an engineering graduate of N. C. State College. He is a nephew of David Clark, editor of the Textile Bulletin.

Master Mechanics Discuss Problems

At a meeting of the Master Mechanics' Division of the Southern Textile Association in Charlotte, N. C., April 27th, a number of problems relating to textile mills were discussed. P. D. Hatley, chairman, of Newberry, S. C., presided, and the open discussion, in which practically everyone present participated, was lively and of much interest to those present.

Details of proceedings, together with a list of those attending, will be published in next week's issue.

Program of Cotton Manufacturers Association Annual Meeting

At the annual meeting of the Cotton Manufacturers' Association in Washington, May 12th-13th-14th, the following program is to be in effect:

Thursday, May 13th, 10 A. M.

Convention called to order by President Comer.
Invocation.

Report of Secretary, W. M. McLaurine.

Address—Donald Comer, President, American Cotton Manufacturers' Association, Birmingham, Ala.

Address—Hon. E. A. O'Neal, President, American Farm Federation.

Address—Hon. John H. Bankhead, Senator from Alabama.

Announcement of Committees—

(a) Nominations.

(b) Resolutions.

Other Business.

2 P. M.

Report—Cason J. Callaway, Chairman of the Board, Callaway Mills, LaGrange, Ga.

Address—David R. Coker, Agriculturalist, Hartsville, S. C.

Address—Claudius T. Murchison, President, The Cotton-Textile Institute, Inc., New York.

8 P. M.

Banquet—Toastmaster, President Donald Comer.

Introduction of Honor Guests.

Address—Hon. Harry L. Hopkins, Administrator, Federal Emergency Relief Administration.

Friday, May 14th, 10 A. M.

Business Session.

Business called to order by President Donald Comer.

Report of Treasurer—W. M. McLaurine, Charlotte, N. C.

Address—Hon. C. S. Ching, Director of Industrial and Public Relations, U. S. Rubber Products Company.

Address—Fred W. Morrison, Washington, D. C.

Report of Committees—

(a) Cotton—A. K. Winget, Chairman, Albemarle, N. C.

(b) Traffic—Capt. Ellison A. Smyth, Chairman, Flat Rock, N. C., Carl R. Cunningham, Traffic Manager, Atlanta, Ga.

(c) Textile Foundation and National Industrial Conference Board, Inc., Stuart W. Cramer, Cramerton, N. C.

(d) General Arbitration Board, George P. Ray, New York, N. Y.

(e) Resolutions.

(f) Nominations.

Election of Officers.

Presentation of Medal.

Unfinished Business.

New Business.

Adjournment.

Entertainment

Thursday afternoon, 4 to 6 o'clock—Reception at the Mayflower for ladies attending convention, given by wives of Southern Senators.

Friday afternoon, 4 to 6 o'clock—Mrs. Franklin Delano Roosevelt will receive the members and guests of the Association at the White House.

Wm. S. Coulter Joins Burlington Mills

Burlington, N. C.—Wm. S. Coulter, for the last 23 years a member of the Alamance County bar and counsel for Burlington Mills Corporation, which has its principal offices in Greensboro, has been named secretary of that corporation and will devote his whole time to his duties in these positions, retiring from the general practice of law.

Mr. Coulter directed legal phases of the organization of the original Burlington Mills, formed when J. Spencer Love was induced to remove to this city a plant he was operating at Gastonia and has since been retained by the corporation as legal adviser.

To Handle Silk Throwing Supplies

Joe Clement, formerly associated with the Pomona Mills, is in active charge of the Dixie Textile Supply Company, Greensboro, N. C., a concern organized to act as manufacturers agents. This concern is to specialize in silk throwing mill supplies, having exclusive sales rights in the South on McHale's Ready-Form flyer wires, flyer blocks, also the Wayne Manufacturing Company's line of separators for spinners and 5-B machines, winding spindles of all kinds, and gudgeon pins.

OBITUARY

E. T. HILLIARD

E. T. Hilliard, 51, of Salisbury, N. C., died April 23. For a number of years he had been second hand of carding in the Salisbury Cotton Mills, and was regarded highly.

T. J. GOGGANS

Thomas J. Goggans, 69, superintendent of the Riverside, Ala., Mill of the West Point Manufacturing Company for 30 years, died Thursday, April 22nd. His wife and seven children survive.

Mr. Goggans was a man of fine character and habits and was very highly regarded.

Trends in the Textile Industry

(Continued from Page 4)

it is a matter that can be handled satisfactorily to both management and labor or handled unsatisfactorily to both management and labor, depending upon the intelligence and judgment that management applies to the problem. And, as I say, I think that matter should receive the very careful consideration of all of us who are charged with the responsibility of this installation as it comes.

The textile industry today stands in something of this position. We have about 27,000,000 spindles in the country, as against approximately 9,000,000 spindles in 1929. Of these 27,000,000 spindles maybe 25,000,000 are active today; of the other 3,000,000 very few can be started up, because they are not in good shape. The only thing that could start them up is a much higher margin of profit than there is today. The population of the country is increasing; there are some 128,000,000 people today. I have just seen the report of the total production for 1936, and it appears that there were about 66 square yards available for consumption per capita in the year 1936. If you recall, it ran down, at the low point, to under 50 square yards; and the peak in 1927, I believe it was, was around 72. So the available production for this country of 128,000,000 people, with the average of 66 square yards per person, is now being produced on 27,000,000 spindles, whereas in 1927, 1928 and 1929 it was being produced on 39,000,000 spindles. The average number of hours run per spindle has increased tremendously, but the fact remains that today we are producing for the needs of this country cotton cloth on far less equipment than we did some years ago. I believe that trend is going to continue. I believe that the output per spindle is going to increase, and that is just another aspect of the point that I brought out before and has a bearing on the problem.

If you will recall, the last time I spoke to this group was just after the so-called general strike in 1934. We had at that time a labor disturbance that we could look back on. I shall not say today that we have one to look forward to, but one does read the newspapers. That leads me to the second thing that I think is important to us today, and with this I will conclude. It seems to me that the problem that faces us in the immediate future is going to be a problem of keeping our labor relationships on an even keel during this period when apparently great efforts are going to be made toward organization—toward union organization. I have told my associates that in my opinion the main problem is not one of organization as opposed to not being organized but the main problem is that during the process, whatever happens as a result of it—which I do not know—that during the process our operating organizations be maintained on as even a keel and with as good morale as it is humanly possible to do. I believe it is going to be something of a problem, because there are undoubtedly going to be made serious efforts to bring into the Southern textile industry organizations of labor which hitherto have been unable to make much progress. And where do we stand during the progress of these efforts? Of course, there are any number of positions that we would take. We could say that we are going to do everything we can to prevent it; we could say we

are going to do everything we can to encourage it; or we could say that we are just going to let the thing slide along and see what happens. I do not know what the answer is. I suspect that the proper procedure depends entirely upon the local conditions which obtain in each mill. But I do believe this to be universal throughout the industry—that we are going to be called upon, as this thing proceeds, to exercise all of the intelligence and all of the brains and all of the patience we have, so that this process that is coming about will not disrupt the entire industry and will not disrupt our own particular operating organizations. I am of the opinion that it can be done, that the thing can be kept steady if those of us who are managing these mills will act with intelligence and such wisdom as we have and with patience.

By illustration, it has been the practice from time to time of some mills, every time somebody joined the union, to fire them. Ordinarily they were fired for dropping a monkey wrench on the floor when they should not have dropped it. But these efforts at organization have led to certain efforts to weed them out, threw them out, get rid of them. That has been one policy followed. I do not believe that policy is going to work. Certainly it will not work legally now, after the decision of the Supreme Court a week ago Monday. We can not conform to the law and follow any such procedure as that. But that is not quite the point, in my humble opinion. I believe that most of the mills have the confidence of their workers, and it is up to us to do nothing to disrupt that confidence. And if we pursue a policy of honesty, legality, and patience we can more likely avoid in this industry during this process, as I say, a lot of difficulties and disorganization and loss of morale and loss of time than if we pursue an arbitrary and thoughtless policy in the matter. That is the second thing I want to plead for among you men who have your noses right on this labor problem, on the handling of help—that as these things develop, as they doubtless will, in our communities the situation be dealt with with fairness, with patience—with unwavering fairness to everyone in our employ. And I think if that policy is pursued our industry will come through this period (which has a lot of question marks in it) sound and safe and in much better shape than if we pursue an arbitrary and what some people like to call a "hard-boiled" policy toward the problem. I can not magnify the importance that that assumes in my mind. There is nobody in the world that can lead our people as we can, if we only will; and I am begging you this afternoon to take a position of leadership in this matter, so that our people will be in a frame of mind that they will follow our leadership rather than be driven off into paths where they are going to follow some other leadership.

I am happy to have had this opportunity to talk with you, and I know that you will appreciate the feeling I have by my talking so frankly on these matters. The only reason I talk of them so frankly is because their importance is very great, in my mind. I think the textile industry in the South today is presented with an opportunity it has never had before to continue its development into a first-class industry, provided those of us who are in positions of responsibility take it upon ourselves to supply intelligent, considerate leadership rather than taking a position that is going to drive our associates off into accepting the leadership of someone else.

Among Those Attending Leaksville Meeting

(Continued from Page 10)

Tuttle, R. H., Supt., Karastan Rug Mill, Marshall Field & Co., Leaksville, N. C.
 Wagoner, John W., Loom-fixer, Minneola Mfg. Co., Gibsonville, N. C.
 Wall, C. P., Marshall Field & Co., Leaksville, N. C.
 Webster, Walter, Capping Dept., Silk Mill, Spray, N. C.
 Werringer, E. L., Loom fixing, Draper Sheetting Mill, Draper, N. C.
 West, Robert W., President, Riverside & Dan River Mills, Danville, Va.
 White, Edward, Card Grinder, Minneola Mfg. Co., Gibsonville, N. C.
 Williams, Claude B., Supt., Sheetting Mill, Marshall Field & Co., Spray, N. C.
 Williams, R. N., Foreman, Silk Mill, Spray, N. C.
 Willis, J. C., Loom-fixer, Wear Well Sheetting Mill, Draper, N. C.
 Wilson, J. F., Group Production Manager, Marshall Field & Co., Fieldale, Va.
 Woodliff, Second Hand, Silk Mill, Spray, N. C.
 Younger, C. L., Second Hand in Carding, Minneola, Mfg. Co., Gibsonville, N. C.
 Yow, G. J., Second Hand Spinning, Minneola Manufacturing Co., Gibsonville, N. C.

High and Low Cotton Prices

The table below was prepared by A. Norden & Co. to show how, year after year, purchases of cotton at the low point during the month of May have proved profitable.

Jan. Contracts	Lowest Price during May	Subsequent Highest Price	Extreme Possible Profit	Lowest Intermediate Price	Extreme Intermediate Decline			
Date	Price	Date	Price	Points	Date	Price		
1901	31	7.46	1/31	12.75	529	6/8	7.47	None
1902	10	6.93	12/13	8.25	132	6/7	7.03	None
1903	30	7.79	9/26	8.92	113	8/1	7.53	26
1904	1	8.52	1/29	15.87	735	10/9	9.10	None
1905	27	10.63	8/31	11.16	53	7/8	9.21	142
1906	5	7.64	12/8	12.12	448	6/9	8.10	None
1907	4	10.41	10/19	11.31	90	8/31	9.00	141
1908	3	10.24	9/5	12.68	244	6/28	11.39	None
1909	1	8.21	1/22	9.78	157	9/2	8.25	None
1910	7	10.08	1/7	15.84	576	5/14	10.17	None
1911	6	12.41	10/14	15.00	260	6/3	11.98	43
1912	12	12.75	6/16	13.78	103	5/19	12.89	None
1913	3	11.06	8/2	13.19	213	5/31	11.17	None
1914	9	10.81	10/27	13.85	304	8/15	10.72	9
1915	8	11.48	6/5	12.91	143	5/15	11.51	None
1916	14	9.70	10/8	13.20	350	7/16	9.08	62
1917	5	12.45	12/1	21.19	874	5/12	12.94	None
1918	11	18.49	1/12	32.44	1295	5/18	19.08	None
1919	24	22.36	9/6	36.35	1399	6/7	22.40	None
1920	8	25.53	1/19	38.86	1533	6/8	26.93	None
1921	24	32.28	6/4	34.93	255	5/25	32.39	None
1922	24	13.54	9/7	21.75	821	6/20	11.89	165
1923	1	17.80	1/24	28.85	1105	5/2	18.37	None
1924	12	21.50	11/30	37.05	1555	7/30	20.52	98
1925	5	23.00	7/28	28.98	598	7/7	22.98	2
1926	13	21.40	7/27	25.10	370	5/18	21.64	None
1927	1	16.80	9/8	18.28	148	7/2	15.90	90
1928	2	15.72	9/8	24.77	905	5/3	15.99	None
1929	4	20.11	6/29	22.45	234	6/12	19.85	26
1930	24	18.45	9/3	19.87	142	7/15	18.23	22
1931	5	14.19	6/2	14.78	59	5/6	14.32	None
1932	28	9.13	7/27	11.06	193	6/8	8.87	26
1933	31	5.70	8/29	9.72	402	6/9	5.36	34
1934	1	8.50	7/18	12.25	375	5/22	8.54	None
1935	1	11.02	8/9	14.03	301	5/2	11.15	None
1936	31	10.68	11/21	11.97	129	9/3	10.31	37
1937	4	10.18	7/10	12.76	258	5/5	10.22	None

The Bishop and His Boss

The Bishop and His Boss, price \$1.00, is a new book by Rev. J. A. Balwin, a Methodist minister who was formerly head of the Industrial Institute, near the Chadwick-Hoskins Mills of Charlotte. It is published by the Meador Publishing Company, Boston, Mass.

The book is dedicated "To all lovers of truth and righteousness," and although fictitious names are used, the author presents same as a true exposure of the workings of the political machine of the Methodist Church. The editor of the TEXTILE BULLETIN being a Methodist and having had unusual opportunities for observing "The Machine," does not think that Rev. Mr. Balwin has overdrawn the picture very much. It is an interesting book.

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Record Low in South's Combed Yarn Inventories

Gastonia, N. C.—The Southern Combed Yarn Spinners Association office stated April 22nd that the lowest yarn inventories in the history of the Southern combed sales yarn spinning industry, since statistical compilation was inaugurated in 1924, is shown by the April 1st survey of stock yarns held by mills of the Southern Combed Yarn Spinners Association. This survey embraces 95 per cent. of all Southern combed yarn manufacturing plants.

This check-up shows that on April 1st unsold stock held by the mills represented only 11 hours' production on present operating time and yarn spun on order and ready for shipment on specifications already received represented only 30 1-3 hours' production. This includes all stocks on hand, ranging in counts from 4s to 120s and covering single and ply yarns of all descriptions and put-ups.

This total is far under total inventories held at the time NRA was inaugurated, and also immediately prior to the September, 1935, strike, when previous lows were established.

In addition to the low stock position, the mills have unfilled orders on their books which will take them through September. Any orders now placed must of necessity be delivered during or after October. Feeling that increases will be felt in all lines of cost, the combed yarn spinners have an extremely bullish feeling toward the yarn market.

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Textile Firms Support Plan

More than 300 large textile manufacturing concerns of the country are co-operating with the Cotton-Textile Institute's plan to increase uses of cotton, according to information received.

The plan calls for an industry-wide "cent-a-bale" program of promotion for cotton goods. Those taking part will contribute one cent for each bale of cotton sold or processed.

Textile manufacturers are looking forward to observation of National Cotton Week from May 31st to June 5th and are expecting an extensive program of cotton goods promotion to be used by stores throughout the country.

Textile Foundation

Officials Re-elected

Washington, D. C.—At the annual meeting of the Textile Foundation here on April 22nd, Franklin W. Hobbs, president of the Arlington Mills, was re-elected chairman for the ensuing year. Stuart W. Cramer will continue as treasurer, and E. T. Pickard as secretary.

The board membership will be the same as during the past year.

SELLING AGENTS for SOUTHERN COTTON GOODS

Deering Milliken & Co.

Incorporated

79-83 Leonard St.

New York

330 West Adams Street, Chicago

CURRAN & BARRY

320 Broadway

New York, N. Y.

Domestic Export
MERCHANDISING
Joshua L. Baily & Co.
10-12 Thomas St. New York



Cotton Goods Markets

New York.—Fairly heavy buying of some types of print cloths and broadcloths late this week broke the slow pace which had characterized the cotton gray cloth market for more than a month.

Business was done under previous mill quotations, but bids for additional large quantities at the low prices were rejected. Sales of sheetings, drills and twills were firm. Fine yard gray cloths in standard constructions remained quiet, with several mills sold solidly ahead and withdrawn from the market. Fancy gray cottons were in moderate demand.

Trading in finished cotton goods was light. Some early trade in wash goods was begun, but this is not expected to swing into full activity until the middle of May or later. On some constructions of colored yarn cottons, buyers found opportunities to shade prices and this released a fair amount of business. Standard domestics, such as sheets, pillow cases, and towels remained strong, and shipments against old contracts continued heavy. Mills are comfortably sold ahead.

Rayon lining cloths sold in moderate amounts at firm prices, but in other classes of rayon fabrics, further weakness developed. Silk fabrics were in fairly steady demand and mills were able to move limited production with little difficulty and few price concessions. Cotton underwear mills were running at peak production against old orders.

The sheeting division managed to sell some moderate lots over the past few days, and prices showed a great deal more stability than the print cloth yarn goods. The week's sales were not very large, but there was an improvement, and the strength of prices has been very general.

Print cloths, 27-in., 64x60s	6¼
Print cloths, 28-in., 64x60s	6¼
Gray goods, 38½-in., 64x60	7½
Gray goods, 39-in., 80x80s	9½
Tickings, 8-ounce	18
Denims	16
Brown sheetings, standard	12
Brown sheetings, 4-yard, 56x60	9½
Brown sheetings, 3-yard	11¼
Dress gingham	16
Staple gingham	12

J. P. STEVENS & CO. Inc.

Selling Agents

40-46 Leonard St., New York

Cotton Yarn Markets

Philadelphia, Pa.—Cotton yarns were quiet with prices steady. Underwear manufacturers displayed little interest in new commitments at the Knitting Arts Exhibition. They found most spinners quoting 45c to 46c on 30s single combed, while carded cones are held from 30c up, depending on quality.

The changed selling policies of most of the leading yarn mills are being demonstrated as effective, thus far, in preventing hurried reductions of price in those counts and for those deliveries where, despite lessened buying at the moment, the yarn mills' position remains strong. The main source of weakness is among the smaller yarn mills whose product is of ordinary quality and whose selling methods frequently are extremely flexible. They are now anxious to sell.

For standard numbers, though demand is below the recent peak, shipments remain heavy, the customers are taking in due deliveries without interruption, so far, and the yarn mills continue operating at or near their best volume of the entire movement. Prices for these yarns are still holding well.

For certain of the standard numbers, prices now being paid are equal to the top rates of two or three weeks ago. Where extra quality is sought, spinners are firm and independent. It is disclosed that the lapse in buying interest has not affected some of the more alert customers, who last month were dickering for coverage of requirements in the third quarter and later, and who now find they can put down their contracts at about the prices they originally figured on paying. Yarn mills, therefore, continue quoting accordingly for numbers on which there is active demand.

This puts individual counts on a price basis that is out of usual relationship to nearby counts and if this continues, it will tend to give price lists a confused appearance.

Southern Single Skeins

8s	30 1/2
10s	31
12s	31 1/2
14s	32
16s	32 1/2
20s	33 1/2
24s	36
26s	38
30s	42
36s	45
40s	46

Southern Single Warps

10s	31
12s	31 1/2
14s	32
16s	32 1/2
20s	33 1/2
24s	36
26s	38
30s	42
36s	45
40s	46

Southern Two-Ply Chain Warps

8s	31
10s	31 1/2
12s	32
14s	32 1/2
16s	33
20s	37
24s	39
26s	40
30s	42
36s	45
40s	47

Southern Two-Ply Skeins

8s	31
10s	31 1/2
12s	32
14s	34
16s	35
20s	37
24s	39
26s	40
30s	42
36s	45
40s	47

Two-Ply Plush Grade

12s	34
20s	38
16s	35
30s	43

Duck Yarns, 3, 4 and 5-Ply

8s	31
10s	31 1/2
12s	32
14s	32 1/2
16s	35
20s	37 1/2

Carpet Yarns

Tinged carpet, 8s, 3 and 4-ply	29
Colored stripe, 8s, 3 and 4-ply	28-29
White carpets, 8s, 3 and 4-ply	31

Part Waste Insulating Yarns

8s, 1-ply	27
8s, 2, 3 and 4-ply	28
10s, 2, 3 and 4-ply	29 1/2
12s, 2-ply	30
16s, 2-ply	33
20s, 2-ply	36
30s, 2-ply	40

Southern Frame Cones

8s	30
10s	30 1/2
12s	31
14s	31 1/2
16s	32
20s	33
22s	34
24s	35
26s	36
28s	37
30s	38
34s	41

CRESPI, BAKER & CO.

Cotton Merchants

L. D. PHONE 997

Charlotte, N. C.

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For
Best Weaving

A Company is
Known by the
Customers It
Keeps



IF IT'S PAPER
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Toilet Tissues
Twines—Wrapping Paper—Boxes, etc.

DILLARD PAPER CO.

GREENSBORO, N. C. GREENVILLE, S. C.



Visiting The Mills

By Mrs. Ethel Thomas Dabbs (Aunt Becky)

TO TEXAS IN A TRAILER

From The Textile Exposition, Representatives of The Textile Bulletin Go West

April 17th—No trio ever started out on a trip with greater glee than we did, and certainly the past week has been a most enjoyable one. "We" means Ben C. Thomas and wife and "Aunt Becky." Mae is our trailer hostess, secretary and treasurer—and boy! *does she squeeze the nickels!* Won't let us go to a movie nor have a cold drink—except water from the ice box!

We've come 1,000 miles, making many detours, and seeing a lot of God's beautiful world that was new to this pencil pusher.

Right now we are in a lovely tourist camp at Mobile, Ala., overlooking the Bay. We have a clear view of Quarantine Island and many fishing smacks, sail boats and tug boats are handling traffic from Biloxi, Gulfport and other points.

Spring is far advanced in this section and is about like June in N. C. So far, Laurel, Miss., is the loveliest city I've seen; but I'd better wait till I get my pictures and a write-up ready before I tell about Laurel.

On account of torn up roads, we came from Laurel, Miss., to Mobile, Ala., by Gulfport, Miss. There simply can not be a lovelier drive than that from Gulfport to Biloxi, Miss., which is right along by the water, held back by a sea wall of concrete that must have cost millions. Between the broad paved highway and the water, there is a strip of lovely park, flowers and green grass, and on the other side imposing homes and hotels surrounded by wondrous beauty. I've never seen so many grand old trees and such a variety of gorgeous flowers and stately palms. Some of the trees are so old they have long gray hair and whiskers (moss).

Sea gulls, ducks, cranes, fish hawks and other unknown birds are busy in the water, while red birds and mocking birds keep up a lively chorus among the trees. A canary we had with us tried to drown them out and looked as if he wanted to lick the whole bunch. The idea of anything making a bigger show than old N. C.!

Well, as soon as we stopped in Mobile, friends of Ben and Mae began to plan for our week-end pleasure. Ben and Mae have been through here before and seem to be

well liked by a host of leading citizens who have accepted me, too.

A fishing party out in the Gulf of Mexico is being organized for our special enjoyment, and here's hoping the wind and waves don't get too obstreperous.

Now we will get back to the mills.

Uniontown, Ala.

Found this mill going nicely on three shifts. New long draft spinning (8,160 spindles) and long draft slubbing have been installed, and there are 2,496 regular spinning spindles. The product is twine, rope and yarn.

The people here are friendly and sociable and our visit was really pleasant and enjoyable. Superintendent Theodore Pibil gave us some fishing line and here's a solemn promise to tell the truth, the whole truth and nothing



Front Row, Left to Right—W. M. Carothers, William Bradford, M. E. Nance and Miss Rosa Duncan, office force.
Back Row, Left to Right—Theodore Pibil, Superintendent; O. K. Shedd, Overseer Twisting; N. C. Hill, Overseer Spinning; C. P. Dickson, Overseer Carding; J. H. Osmer, Master Mechanic; V. S. Yelverton, Overseer Brownell Department, and G. W. Miller, Jr., Shipping Clerk.

but the truth concerning the size of the fish we catch when we use said lines.

Was delighted to see a former versatile correspondent to this department—"Billie Joe"—her handsome hubby, G. W. Miller, and promising young son, G. W., Jr., who has recently been made shipping clerk. Also saw Mrs. Viola Nance, charming daughter of Mr. and Mrs. Miller.

C. P. Dickson is overseer carding; N. C. Hill, overseer spinning; O. K. Shedd, overseer twisting; V. S. Yelverton, Brownell department; J. H. Osmer, master mechanic, and G. W. Miller, shipping Clerk.

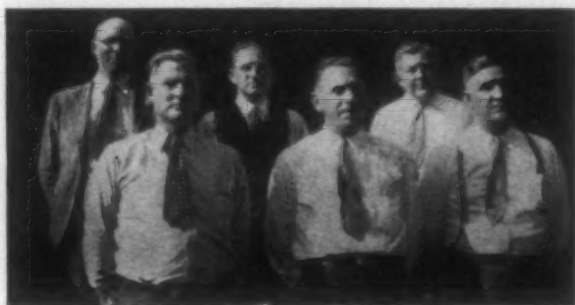
Opelika, Ala.—Pepperell Mfg. Co.

When I get to an up-to-date mill like this, where people live in lovely homes with every convenience, and have short hours and good wages, memory takes me back to the time when I became initiated into the textile industry and the complications and mysteries of weaving.

I had a very inferior home to live in, compared to homes of today. Water was brought from a well in the street which served every family in the block. There were no electric lights in the homes, and outside toilets were something terrible, with houses unscreened and flies by the millions.

Wages from 85 cents to one dollar a day, and payday the 1st and 15th. An operative who drew \$13 for two weeks was a "champion" in his department. "Docking" was common, and many a weaver was docked a dollar for a small flaw—more than a day's wages in many instances.

If for any reason the wheels stopped turning for five minutes we had to make up the time, and were glad of the chance to "get the cut mark across." After stopping



Left to Right, Front Row—D. D. Golden, Overseer Weaving; H. L. Lanier, Spinner; A. A. Haddox, Carder.
Back Row, Left to Right—J. M. Beck, Master Mechanic; R. B. Horsley, Production Manager, and Charlie Duke, Overseer Cloth Room.

time Saturday evening at 5 o'clock we had to "clean off," and we couldn't go home till machines were inspected. If the overseer had a grudge against the operative, nine times out of ten the machines had to be gone over again!

But in spite of it all, operatives took pride in their work. The majority had come from farms and had seldom seen a dollar, except when cotton was sold, and just got a glimpse of it then as it passed on to the merchant who had furnished the year's supplies at cut-throat prices.

At this time I would like to send a message from a loving heart to mill people everywhere: "Be thankful for the glorious opportunities that are yours today, and treasure and protect 'the goose that lays the golden eggs.'"

In all history working people have never before had present-day advantages: God has wonderfully blessed us: let us not be ungrateful, but thankful, loyal and faithful to duty, thus promoting and fostering textile and educational progress in our beautiful Southland.

Oh, well. I did not mean to "sermonize," but I am a mill woman and proud of it; I love mill people and am jealous for their permanent welfare; I don't want to see them lose their jobs and lovely homes, their cars, radios and electric refrigerators. I want to see them prosperous and continuously happy.

Some of the finest people in the world are at Pepperell

Mills; they have every possible advantage, and know it. One of the nicest school buildings we have seen tops a lovely eminence in the village, the homes are attractive and well painted, work is on eight-hour shifts; everybody



Left to Right—J. P. Baum, Assistant Agent; H. P. Carter, Agent, and O. M. Nolan, Watchman.

looks well, dresses well and seems happy. It is an honor to live and work here and operatives have the respect of all who know them.

The pictures accompanying this mill give only a faint idea of how splendid these people are: here you see their handsome faces, but get no conception of how big-hearted they are.

Meet Our Subscribers

H. M. Carter, agent, J. P. Baum, his assistant, and R. B. Horsley, production manager, are always courteous and helpful.

In Card Room: A. A. Haddox is overseer; W. B. Dial and N. V. Smith, assistant overseers; D. D. Gains, Fred D. Jones, Herbert Ponder and C. B. Atkins are section men; and W. H. Hagan, J. A. Stuart and A. S. Chisenhall are card grinders. On second shift, J. W. McCrickard, Leland Dolan, Charles Davis, J. B. Garrett, Reid Armstrong and F. G. Cofield are the progressive section men.

In Spinning: H. L. Lanier is overseer; W. M. Pitts, assistant overseer; Cecil Phillips, Heflin Knight, O. A. DeLoach, Leslie Kenney, A. J. Altman and J. N. Cole, section men in spinning, and J. N. Cole, section man in winding; Jesse Akins and Brady Milner, doffers; Marshall Knight, oiler. On second shift, C. M. Moore, overseer; T. A. Abernathy, Jack Jolly, G. G. Buckingham, Roger Beck and Mack Riddle, section men; J. A. B. Raburn, doffer, and W. G. Smith, oiler.

Weave Room: D. D. Golden, overseer weaving, is a hustler and has an unusually fine bunch of loom fixers who read our Journal. They are: J. H. Jones, W. E. McKee, W. O. Stecher, E. D. Mobley, M. D. Suits, E. F. Davis and Raymond Tucker, on first shift. On second shift, R. C. Plant and C. H. Gladden are overseers, with Coy Adkins and S. G. Taylor, progressive loom fixers.

C. L. Duke is overseer of the cloth room; J. M. Beck, master mechanic. O. M. Nolan, watchman, has been on the job nine years, and has several sons and daughters making good wages in the mill.

Improvements

There doesn't seem much to do in this line, as everything is strictly up-to-date, but repainting goes on at some point constantly.

Southern Sources of Supply

For Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

ABBOTT MACHINE CO., Wilton, N. H. Sou. Agt., L. S. Ligon, Greenville, S. C.

ACME STEEL CO., THE, 2840 Archer Ave., Chicago, Ill. Sou. Sales Offices: Georgia—Atlanta, Acme Steel Co. of Ga., Inc., 603 Stewart Ave.; F. H. Webb, Mgr., 1281 Oxford Rd., N.E.; W. H. Duane, 1196 Virginia Ave., N.E. North Carolina—Charlotte, F. G. German, 1617 Beverly Drive. South Carolina—Greenville, G. R. Easley, 107 Manly St. Tennessee—Signal Mountain, W. G. Polley, 802 James Blvd. Florida—Orlando, R. N. Siliars, 605 E. Gore Ave.

AKRON BELTING CO., Akron, O. Sou. Branches, 209 Johnston Bldg., Charlotte, N. C.; 905 Woodside Bldg., Greenville, S. C.; 20 Adams Ave., Memphis, Tenn.

ALLIS-CHALMERS MFG. CO., Milwaukee, Wis. Sou. Sales Offices: Atlanta, Ga., Healey Bldg., Berrien Moore, Mgr.; Baltimore, Md., Lexington Bldg., A. T. Jacobson, Mgr.; Birmingham, Ala., Webb Crawford Bldg., John J. Greagan, Mgr.; Charlotte, N. C., Johnson Bldg., William Parker, Mgr.; Chattanooga, Tenn., Tennessee Electric Power Bldg., D. S. Kerr, Mgr.; Cincinnati, O., First National Bank Bldg., W. G. May, Mgr.; Dallas, Tex., Santa Fe Bldg., E. W. Burbank, Mgr.; Houston, Tex., Shell Bldg., K. P. Ribble, Mgr.; New Orleans, La., Canal Bank Bldg., F. W. Stevens, Mgr.; Richmond, Va., Electric Bldg., C. L. Crosby, Mgr.; St. Louis, Mo., Railway Exchange Bldg., C. L. Orth, Mgr.; San Antonio, Tex., Frost National Bank Bldg., Earl R. Hurry, Mgr.; Tampa, Fla., 415 Hampton St., H. C. Flanagan, Mgr.; Tulsa, Okla., 18 North Guthrie St., D. M. McCargar, Mgr.; Washington, D. C., Southern Bldg., H. C. Hood, Mgr.

AMERICAN BLOWER CORP., Detroit, Mich. Sou. Offices: Court Square Bldg., Baltimore, Md.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Rooms 716-19, 101 Marietta St. Bldg., Atlanta, Ga.; 846 Baronne St., New Orleans, La.; 1005-6 American Bldg., Cincinnati, Ohio; 619 Mercantile Bldg., Dallas, Tex.; 201 Petroleum Bldg., 1314 Texas Ave., Houston, Tex.; 310 Mutual Bldg., Kansas City, Mo.; 620 S. 5th St., Architects & Bldrs. Exhibit Bldg., Louisville, Ky.; 1433 Oliver Bldg., Pittsburgh, Pa.; 7 North 6th St., Richmond, Va.

AMERICAN CYANAMID & CHEMICAL CORP., 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, 822 W. Morehead St., Charlotte, N. C.; Paul Haddock, Sou. Mgr.

AMERICAN ENKA CORP., 271 Church St., New York City. Sou. Rep., R. J. Mebane, Asheville, N. C.

AMERICAN MOISTENING CO., Providence, R. I. Southern plant, Charlotte, N. C.

AMERICAN PAPER TUBE CO., Woonsocket, R. I. Sou. Rep., Ernest F. Culbreth, P. O. Box 11, Charlotte, N. C.

ARMSTRONG CORK PRODUCTS CO. (Textile Division), Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. T. L. Hill.

ARNOLD, HOFFMAN & CO., Inc., Providence, R. I. Frank W. Johnson, Sou. Mgr., Box 1268, Charlotte, N. C. Sou. Reps., Robert E. Buck, Box 904, Greenville, S. C.; Harold T. Buck, 1615 12th St., Columbus, Ga.; W. Chester Cobb, Hotel Russell Erskine, Huntsville, Ala.

ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep., Textile Supply Co., Dallas, Tex.

ATLANTA HARNESS & REED MFG. CO., Atlanta, Ga. G. P. Carmichael, Atlanta Office; Alabama, Georgia and Mississippi Rep., Barney R. Cole, Atlanta Office; North Carolina and South Carolina Rep., Dave Jones, Greenville, S. C.

BAHNSON CO., THE, Winston-Salem, N. C. North and South Carolina Rep., S. C. Stinson, Winston-Salem, N. C. Sou. Rep., I. L. Brown, 886 Drewry St., N.E., Atlanta, Ga. Northern Rep., F. S. Frambach, 703 Embree Crescent, Westfield, N. J. Western Rep., D. D. Smith, 906 W. Lovell St., Kalamazoo, Mich.

BANCROFT BELTING CO., Boston, Mass. Sou. Rep., Ernest F. Culbreth, P. O. Box 11, Charlotte, N. C.

BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBee Ave., Greenville, S. C.; J. H. Spencer, Mgr.

CHARLES BOND CO., 617 Arch St., Philadelphia, Pa. Sou. Reps., Harold C. Smith, Greenville, S. C.; Harold C. Smith, Jr., Greenville, S. C.; John C. Turner, P. O. Box 1344, Atlanta, Ga.

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BROWN & CO., D. P., Philadelphia, Pa. Sou. Rep., N. W. Pyle, Box 834, Charlotte, N. C.

CAMPBELL & CO., JOHN, 75 Hudson St., New York City. Sou. Reps., M. L. Kirby, P. O. Box 432, West Point, Ga.; Mike A. Stough, P. O. Box 701, Charlotte, N. C.; A. Max Browning, Hillsboro, N. C.

CAROLINA DRILLING & EQUIPMENT CO., Sanford, N. C.

CAROLINA REFRACTORIES CO., Hartsville, S. C.

CHARLOTTE CHEMICAL LABORATORIES, Inc., Charlotte, N. C.

CHARLOTTE LEATHER BELTING CO., Charlotte, N. C.

CIBA CO., Inc., Greenwich and Morton Sts., New York City. Sou. Offices and Warehouses, Charlotte, N. C.

CLINTON CO., Clinton, Iowa. Sou. Agt., Luther Knowles, Jr., Box 127, Tel. 2-2486, Charlotte, N. C. Sou. Reps., Grady Gilbert, Box 127, Charlotte; Clinton Sales Co., Inc., Byrd Miller, 2 Morgan Bldg., Greenville, S. C.; Lee Gilbert, Box 481, Tel. 2913, Spartanburg, S. C.; A. C. Boyd, 1071 Bellevue Drive, N.E., Tel. Hemlock 7055, Atlanta, Ga. Stocks carried at Carolina Transfer & Storage Co., Charlotte; Consolidated Brokerage Co., Greenville, S. C. Atlanta Service Warehouse, Atlanta.

COMMERCIAL FACTORS CORP., 2 Park Ave., New York City. Sou. Rep., T. Holt Haywood, Reynolds Bldg., Winston-Salem, N. C.

CORN PRODUCTS REFINING CO., 17 Battery Place, New York City. Corn Products Sales Co., Greenville, S. C., John R. White, Mgr.; Corn Products Sales Co., Montgomery Bldg., Spartanburg, S. C., J. Canty Alexander, Asst. Sou. Mgr.; Corn Products Sales Co. (Mill and Paper Starch Div.), Hurt Bldg., Atlanta, Ga., C. G. Stover, Mgr.; Corn Products Sales Co., 824-25 N. C. Bank Bldg., Greensboro, N. C., W. R. Joyner, Mgr.; Corn Products Sales Co., Comer Bldg., Birmingham, Ala., L. H. Kelley, Mgr. Stocks carried at convenient points.

CRESPI, BAKER & CO., 411½ S. Tryon St., Charlotte, N. C.

CROMPTON & KNOWLES LOOM WORKS, Worcester, Mass. Sou. Plant, Charlotte, N. C.

CUTLER, ROGER W., 141 Milk St., Boston, Mass. Sou. Office, Woodside Bldg., Greenville, S. C. Sou. Agents: B. L. Stewart Roller Shop, Laurinburg, N. C.; Dixie Roller Shop, Rockingham, N. C.; A. J. Whittemore & Sons, Burlington, N. C.; The Georgia Roller Covering Co., Griffin, Ga.; Textile Roll Covering Works, LaGrange, Ga.; East Point Roller Cov. Co., East Point, Ga.; Dixie Roll & Cot Co., Macon, Ga.; Morrow Roller Shop, Albemarle, N. C.; Peerless Roll Covering Co., Chattanooga, Tenn.; Textile Roll & Cot Co., Dallas, Tex.; Greenville Textile Supply Co., Greenville, S. C.; Anniston Roll Covering Co., Anniston, Ala.

DARY RING TRAVELER CO., Taunton, Mass. Sou. Rep., John E. Humphries, P. O. Box 842, Greenville, S. C.; Chas. L. Ashley, P. O. Box 720, Atlanta, Ga.

DAUGHTRY SHEET METAL CO., Charlotte, N. C.

DENISON MFG. CO., THE, 145 Lyman St., Asheville, N. C. Sou. Rep., L. B. Denison, Genl. Mgr.

DILLARD PAPER CO., Greensboro, N. C., Greenville, S. C., Charlotte, N. C. Sou. Reps., E. B. Spencer, Box 1267, Charlotte, N. C.

DRAPER CORPORATION, Hopedale, Mass. Sou. Rep., E. N. Darrin, Vice-Pres.; Sou. Offices and Warehouses, 242 Forsyth St., S.W., Atlanta, Ga.; W. M. Mitchell; Spartanburg, S. C.; Clare H. Draper, Jr.

DUNKEL CO., PAUL A., 82 Wall St., New York City.

DU PONT DE NEMOURS & CO., Inc., E. I., Dyestuffs Div., Wilmington, Del. John L. Dabbs, Mgr.; D. C. Newman, Asst. Mgr.; E. P. Davidson, Asst. Mgr.—Technical, Sou. Warehouses, 302 W. First St., Charlotte, N. C. Reps., L. E. Green, H. B. Constable, W. R. Ivey, Charlotte Office; J. D. Sandridge, W. M. Hunt, 1031 Jefferson Standard Bldg., Greensboro, N. C.; B. R. Dabbs, John L. Dabbs, Jr., 715 Providence Bldg., Chattanooga, Tenn.; R. D. Sloan, Amanda Apt., Greenville, S. C.; J. M. Howard, 135 S. Spring St., Concord, N. C.; W. F. Crayton, Dimon Court Apt., Columbus, Ga.; J. A. Franklin, Augusta, Ga.; Tom Taylor, Newnan, Ga.

DU PONT DE NEMOURS & CO., Inc., E. I., The R. & H. Chemicals Dept., Wilmington, Del. R. M. Levy, Dist. Sales Mgr., 302 W. First St., Charlotte, N. C.

EATON, PAUL B., 213 Johnston Bldg., Charlotte, N. C.

EMMONS LOOM HARNESS CO., Lawrence, Mass. Sou. Reps., George F. Bahan, P. O. Box 581, Charlotte, N. C.; Herbert Booth, Claridge Manor Apt., Birmingham, Ala.

ENGINEERING SALES CO., 217 Builders' Bldg., Charlotte, N. C.; S. R. and V. G. Brookshire.

FAFNIR BEARING CO., New Britain, Conn. Sou. Reps., Stanley D. Berg, No. 321 N. Caswell Road, Charlotte, N. C.; A. G. Laughridge, No. 248 Spring St., N.W., Atlanta, Ga.

FOSTER MACHINE CO., Westfield, Mass. Sou. Reps., R. W. Ensign, Charlotte, N. C.

FRANKLIN MACHINE CO., 44 Cross St., Providence, R. I.

FRANKLIN PROCESS CO., Providence, R. I. Sou. Plants, Greenville, S. C., and Chattanooga, Tenn.

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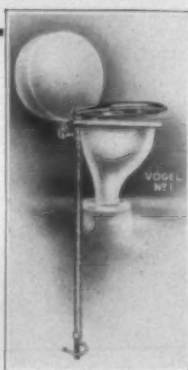
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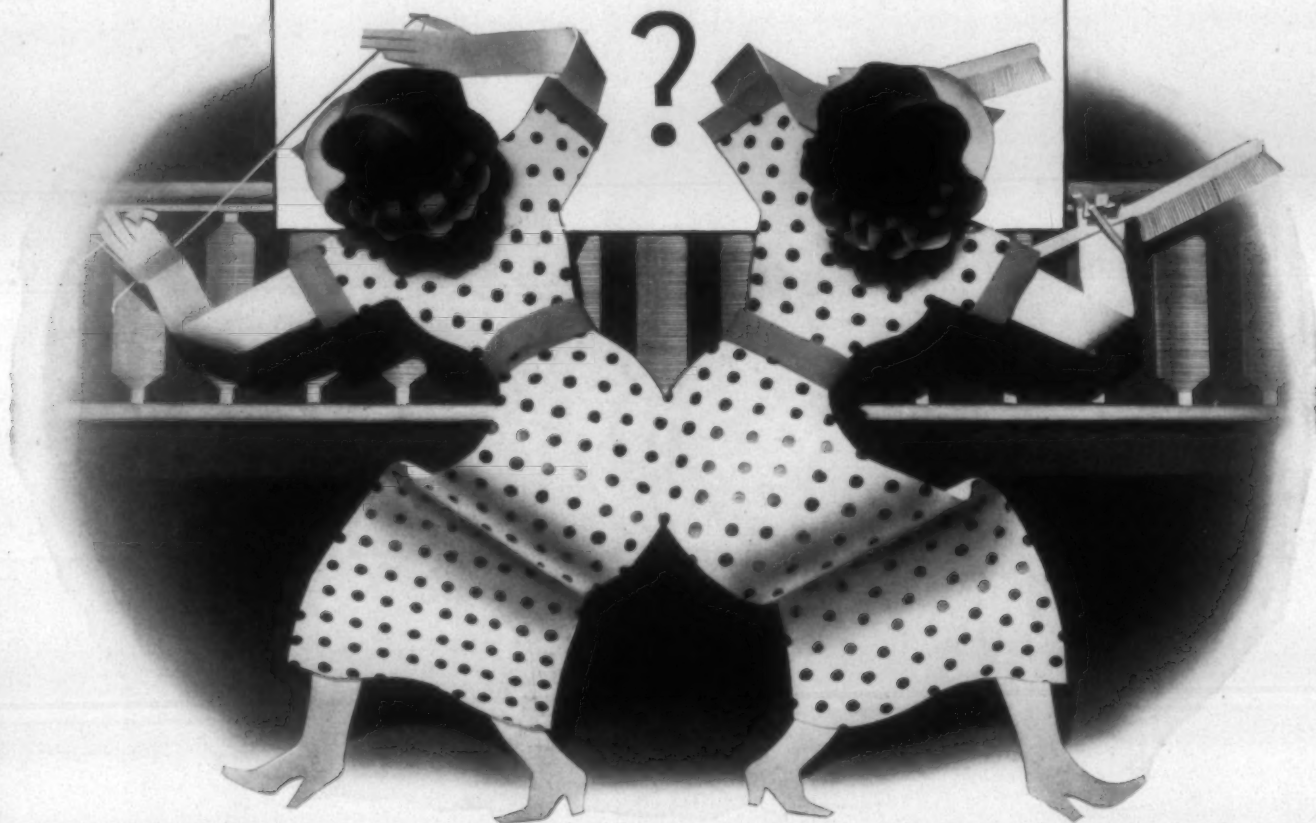
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